

**10/100/1000Mbps  
Intelligent Stackable Switch**

**SGSW-2402**

**User's Manual**



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## **Revision**

**PLANET Intelligent Stackable Switch User's Manual**

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# 1. INTRODUCTION

## 1.1 Checklist

**Check the contents of your package for following parts:**

- SGSW-2402.
- User's manual CD.
- Power cord.
- 19" rack mounting kit.
- RS-232 cable.
- Quick Installation Guide.

If any of these pieces are missing or damaged, please contact your dealer immediately, if possible, retain the carton including the original packing material, and use them against to repack the product in case there is a need to return it to us for repair.

## 1.2 About the Switch

The SGSW-2402 Intelligent stackable Switch is designed to provide your network with Ethernet, Fast Ethernet, Gigabit Ethernet connectivity over twisted pair and fiber optic cabling.

Two expansion slots on the front panel of the SGSW-2402 Intelligent Switch further add to the flexibility of the systems.

The SGSW-2402 Intelligent Switch is a combination of 24x10/100M Ethernet RJ-45 ports and 2 optional module slots.

The two optional modules can be 1-Port 100 Base-FX Intelligent Fiber Module, Gigabit 1000Base-T Intelligent Switch Modules, and Gigabit 1000Base-SX/LX Intelligent Fiber Modules.

With its build-in Web-based Management, managing and configuring the SGSW-2402 Intelligent Switch becomes easier.

From cabinet management to port-level control and monitoring, you can visually configure and manage your network via Web Browser, just click your mouse instead of typing cryptic command strings. However, the SGSW-2402 Intelligent Switch can also be managed via Console, or third-party SNMP Management.

## 1.3 Features

- Complies with the IEEE802.3 Ethernet, IEEE802.3u Fast Ethernet , IEEE802.3z and IEEE802.3ab Gigabit Ethernet standard
- Provide 2 module slots for 100Mbps-FX, 1000Mbps-T or 1000Mbps-SX/LX option of modules
- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- Auto-negotiation & Full-duplex/Half-duplex
- Automatic source address learning and aging
- Support up to 4K MAC address
- Support IEEE802.1D Spanning Tree Protocol
- IEEE802.3x compliant full-duplex flow control
- Broadcast storm control, runt and CRC Filtering eliminates erroneous packets to optimize the network bandwidth
- Support to handle up to 1522 bytes packet
- Stack up to 8 units

- LED indicators for simple diagnostics and management
- Internal power supply
- Auto MDI/ MDI-X on each port
- Network management configuration:
  - Web-based management
  - Console and Telnet Configuration
  - SNMP network management
  - IEEE 802.1Q Tagging VLAN (32 VLAN Group)
  - Port Trunking supported
  - IEEE 802.1D Spanning Tree Protocol (STP)
  - IGMP and Sniffer (Port Mirroring) supported
  - Port Priority - 802.1p supported
  - MAC / IP Address search
  - Port security control (MAC address filtering)
  - Virtual stacking up to 8 units
  - Broadcast Storm Filter function supported
  - Firmware upgradeable through Web interface

## 1.4 Specification

<b>Product</b>	<b>SGSW-2402</b> <i>10/100/1000Mbps Intelligent Ethernet Stackable Switch</i>
<b>Hardware Specification</b>	
Ports	24 10/ 100Base-TX RJ-45 Auto-MDI/MDI-X ports
Module Slot	2 for 1000Base-SX/LX/T and 100Base-FX modules
Stack Interface	Through Ethernet interface. Up to 8 units can be managed by single IP
Switch Fabric	9.6Gbps
Switch Processing Scheme	Store-and-forward
Throughput (packet per second)	6.547Mpps
Address Table	4K entries
Queue Buffer	16Mbytes
Flow Control	Back pressure for half duplex, IEEE 802.3x Pause Frame for full duplex
Broadcast Storm Control	Discards broadcast packets at a critical threshold
Dimensions	431 x 201 x 44.5 mm, 1U high
Weight	3.1 kg
Power Requirement	100~240 VAC, 50-60 Hz
Power Consumption / Dissipation	50 Watts maximum / 170 BTU/hr maximum
Temperature	Operating: 0~40°C, Storage -20~70°C
Humidity	Operating: 10% to 90%, Storage: 5% to 90% (Non-condensing)
<b>Network Management</b>	
System Configuration	Console port, Web browser, SNMP/RMON
Management Agent	SNMP Support: MIB II, Ethernet MIB, Repeater MIB and RMON MIB
RMON	Groups 1 (Statistics)
Spanning Tree Algorithm	IEEE 802.1D provides redundant link support

VLAN	802.1Q VLAN, up to 32 VLANs supported	
QoS	IEEE 802.1p QoS support with 2 priority queue using WFQ (Weighted Fair Queueing)	
IGMP Multicast Filtering	Passive snooping on IGMP Query/Report messages	
Port trunking	Up to 4 ports can be combined into a fat pipe	
Port Mirroring	1 mirroring port to monitor several mirrored ports	
<b>Standards Conformance</b>		
Regulation Compliance	FCC Part 15 Class A, CE	
Standards Compliance	IEEE 802.3 (Ethernet) IEEE 802.3u (Fast Ethernet), IEEE 802.3z (1000Base-SX/LX), IEEE 802.3ab(1000Base-T), IEEE 802.1D (STP), IEEE 802.3x (full-duplex flow control), IEEE 802.1p (QoS), IEEE 802.1Q (VLANs)	RFC 768 UDP RFC 783 TFTP RFC 791 IP RFC 792 ICMP RFC 826 ARP RFC 1122 Host Requirements RFC 2068 HTTP RFC 2236 IGMP v2 RFC 1157 SNMP v1/v2 RFC 1213 MIB II RFC 1643 Ethernet MIB RFC 1757 RMON group 1, statistics

## 2. HARDWARE DESCRIPTION

This product series provide three different running speed – 10Mbps, 100Mbps, and 1000Mbps in the same switch and automatically distinguish the speed of incoming connection.

This section describes the hardware features of these Switches. For easier management and control of the switch, familiarize yourself with its display indicators, and ports. Front panel illustrations in this chapter display the unit LED indicators. Before connecting any network device to the switch, read this chapter carefully

There are following option module for expansion:

- 1-Port 100 Base-FX Intelligent Fiber Module
- 1-Port Gigabit 1000Base-T Intelligent Switch Module
- 1-Port Gigabit 1000Base-SX/LX Intelligent Fiber Module

### 2.1 Front Panel

The Front Panel of the SGSW-2402 Intelligent Switch consists of 24x auto-sensing 10/100Mbps Ethernet RJ-45 Ports, two optional expansion slots, and Console port. The LED Indicators are also located on the front panel of the Switch.



SGSW-2402 Switch front panel

#### 2.1.1 LED indicators

SGSW-2402		
PWR	Green	Lit on: Power on Lit off: power off
Link	Green	Lit on: the connection is good Lit off: the port is disabled or not detecting a link
<b>Mode:</b> (could be three kinds of meaning, varies with the Mode button)		
ACT	Green	Lit on: the connection is good. Blink: The port is receiving or transmitting data
FDX	Green	Lit on: the port run at full-duplex Blink: Half-Duplex/ Collision Off: Half-duplex or not connected
100	Green	Lit on: run at 100Mbps Lit off: run at 10Mbps or not connected

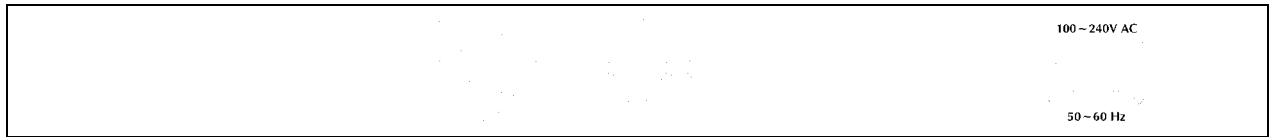
#### 2.1.2 Buttons indicators

SGSW-2402	
RESET	When press this button, Switch will reboot
MODE	Hold the button for at least 5 seconds and release, the LED will turns to the next LED in cycle. (ACT → FDX → Speed → ACT)



## 2.2 Rear Panel

The rear panel of the Switch indicates an AC inlet power socket which accepts input power from 100 to 240VAC, 50-60Hz.



SGSW-2402 Switch rear panel

### Power Notice:

1. The device is a power-required device, it means, it will not work till it is powered. If your networks should active all the time, please consider using UPS (Uninterrupted Power Supply) for your device. It will prevent you from network data loss or network downtime.
2. In some area, installing a surge suppression device may also help to protect your switch from being damaged by unregulated surge or current to the Switch or the power adapter.

## 2.3 Hardware Installation

### 2.3.1 Connecting end node or hub or switch

1. Place the Switch on a smooth surface or fasten the mounting brackets with the provided screws in a standard 19" rack.
2. Connect switch or PC to one port of the Switch using Category 3/4/5 UTP/STP cabling.
3. Connect another switch or PC to the other port of Switch by following the same process as described in Step2.

### Notice:

#### Cable distance for Switch

The cable distance between Ethernet Switch and hub/PC should not exceed 100 meter for UTP/STP cable, 2km for 62.5/125 and 50/125 fiber cable on 100Base-FX module, 220m for 62.5/125 fiber cable and 500m for 50/125 fiber cable on 1000Base-SX module, 550m for 62.5/125 and 50/125 fiber cable and 10km for 9/125 fiber cable on 1000Base-LX module.

#### Make sure the wiring is correct

It can be used Category 3/4/5 cable in 10 Mbps operation. To reliably operate your network at 100Mbps and 1000Mbps, you must use an Unshielded Twisted-Pair (UTP) Category 5 cable, or better Data Grade cabling. While a Category 3 or 4 cable may initially seem to work, it will soon cause data loss.

### 2.3.2 Connecting to Network Backbone or Server

Connect to the Gigabit Ethernet ports with Category 5 copper cable or fiber optic cable for uplinking to a network backbone or network server. These ports operate at 1000Mbps in full-duplex mode. A valid connection is indicated when the Link LED is light.

## 2.4 Terminal Setup

To configure the system, connect a serial cable to a COM port on a PC or notebook computer and to serial (console) port of the device. The console port of the device is DCE already, so that you can connect the console port directly through PC without the need of Null Modem.

A terminal program is required to make the software connection to the device. Windows' Hyper Terminal program may be a good choice. It can be accessed from the Start menu. Click START, then Programs, Accessories and then Hyper Terminal.

MS-DOS based terminal program such as PC-PLUS, PROCOMM, can also make the connection with the device built-in software. The COM port should be configured as:

- ◆ Baud : 38400
- ◆ Parity : None
- ◆ Data bits : 8
- ◆ Stop bits : 1
- ◆ Flow Control: none

Once the terminal has connected to the device, power on the device. The terminal will display that it is loading the firmware. Then, the screen as below will show up:

```
Attached TCP/IP interface to sgsEnd unit 0
Attaching interface lo0...done

+++++
+                               +
+ Boot Loader Version 1.20 +
+                               +
+++++

Press ENTER to stop auto-boot ...
Auto-booting ...

Firmware version: 1.10

Loading firmware ...
Attaching interface lo0...done

Port 26 : No module

Port 25 --- GMI module : Link Down
```

Press “Enter” and input the password. The default password is “**admin**”.

## 2.5 IP Configuration

Once log on to the console, the “Command>” prompt will be shown. You can type “help” for all available commands.

```
Attaching interface lo0...done

+++++
+                               +
+ Boot Loader Version 1.20 +
+                               +
+++++

Press ENTER to stop auto-boot ...
Auto-booting ...

Firmware version: 1.10

Loading firmware ...
Attaching interface lo0...done

Port 26 : No module

Port 25 --- GMI module : Link Down
Password:*****

Welcome!

Command>
```

To setup the IP address, please use "sys set ip" command in the following format:

**sys set ip <IP Address> <Subnet Mask> <Default Gateway>**

For example, to configure the switch with the following IP settings:

IP Address: 192.168.0.2

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.0.254

Press input the following command and press <Enter> button:

**sys set ip 192.168.0.2 255.255.255.0 192.168.0.254**

If the IP is successful configured, the switch will automatically restart as the following window. You can then configure the switch through its web interface.

```
Command>sys set ip 192.168.0.1 255.255.255.0 192.168.0.254
Change IP Address successfully!
Updating config succeeded!
Attached TCP/IP interface to xpcEnd unit 0
Attaching interface lo0...done

+++++
+                               +
+ Boot Loader Version 1.20 +
+                               +
+++++

Press ENTER to stop auto-boot ...
Auto-booting ...

Firmware version: 1.10

Loading firmware ...
Attaching interface lo0...done

Port 26 : No module

Port 25 --- GMII module : Link Down

_
```

## 3.WEB-BASED MANAGEMENT

### 3.1 Configuration

As well as the menu-driven system configuration program, the agent module provides an embedded HTTP Web agent. This agent can be accessed by any computer on the network using a standard Web browser (Internet Explorer 5.0 or above, or Netscape Navigator 4.5 or above).

Using the Web browser management interface you can configure a switch and view statistics to monitor network activity. The Web interface also provides access to a range of SNMP management functions with access to the switch's MIB and RMON database.

Prior to accessing the switch from a Web browser, be sure you have first performed the following tasks:

Configure it with a valid IP address, subnet mask, and default gateway using an out-of-band serial connection.

For Internet Explorer 5.0 or later version user, please check the Java setting below before startup.

1. Click on Tools
2. Pick Internet Options
3. Select the Security tab
4. Select Local Intranet (click on the icon)
5. Click on Sites, click Advanced and add the IP address of the switch to the zone
6. Click on Custom Level
7. Scroll down and set Java Permissions to Custom
8. Press the Java Custom Settings button
9. Select the Edit Permissions tab
10. Set Run Unsigned Content to Enable
11. Press OK for all open dialog windows



#### NOTE

For IE5.0 or later version, if you can not find the Java option in point 7, please make sure your Ethernet Explorer is installed with "Microsoft VM" JAVA virtual-machine plug-in.

### 3.2 Web Pages

To access the Web-browser interface you must first enter the password. The default password is "admin" You will see the following screen comes out on the Web browser program:



Figure 3-1 : Password Screen

After the password is entered you will see the main menu screen.



Figure 3-2: The start up screen of SGSW-2402 Web Page

### 3.3 Port Config

This section allows you to have an easy access in configuring the ports of the management Switch. Notice that the "Link state" option indicates "Up". This shows that the port is connected to the network. It can either be in "Up" (Connected) or "Down" (No connection) state.

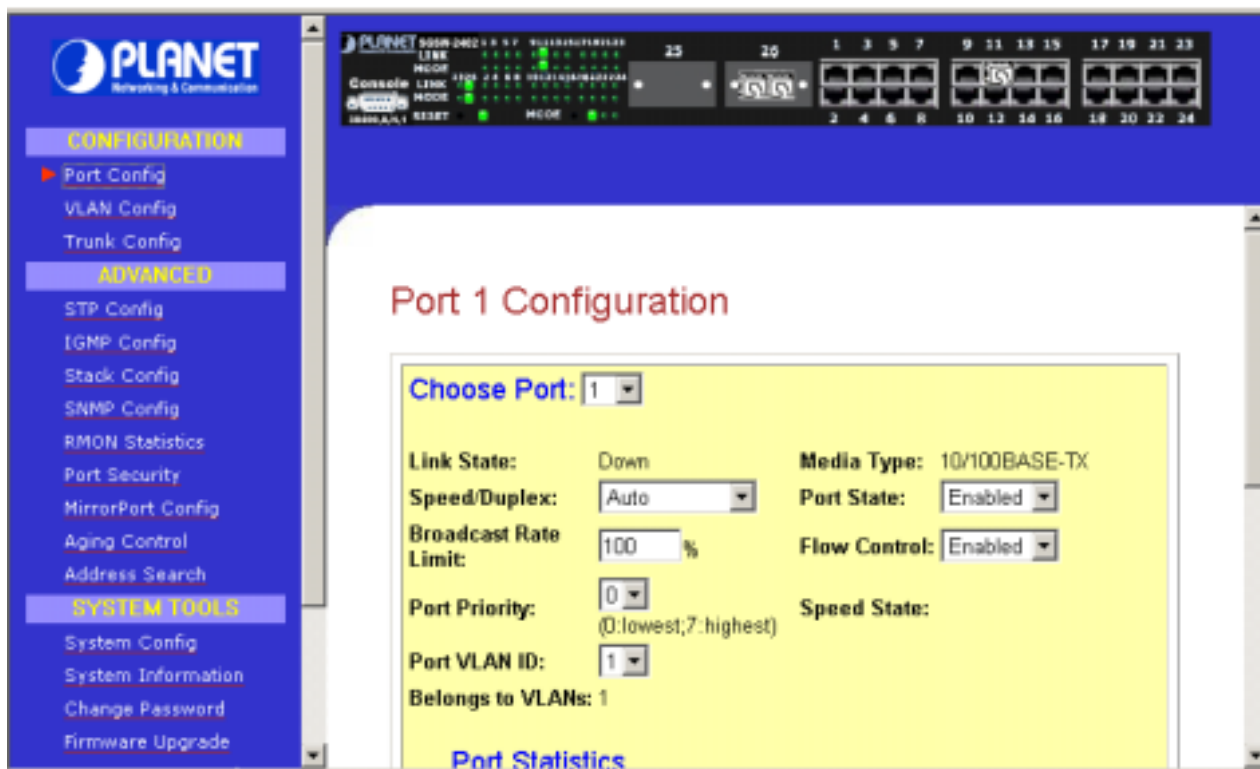


Figure 3-3 The Port Config screen

### Choose Port

You can choose a port either by clicking on the picture or by selecting it at the “Choose Port” field.

### Speed/ Duplex

Speed/ Duplex is to select the operation mode of chosen port. The options are as:

- ‘Auto’: Auto negotiation
- ‘10Mbps HD’: 10 Base-T Half Duplex
- ‘10Mbps FD’: 10Base-T Full Duplex
- ‘100Mbps HD’: 100Base-TX Half Duplex
- ‘100Mbps FD’: 100Base-TX Full Duplex

### Broadcast Rate Limit

This function sets broadcast limit to the desired rate for the specified port. It controls the reception of broadcasting packets. The ranging for Broadcast rate limit varies from 0% to 100%. The higher the rate is, the more broadcast packets can pass through the port. Rate is the percent of the traffic to allow before throttling. That is, if you configure this value to 10% and current connected speed is 100M, Only 10M broadcast data can pass through the port.

### Port Priority

In a tagged VLAN application, you can specify the VLAN priority to expedite the VLAN traffic. There are 8 levels of priority, namely ‘0’, ‘1’, ‘2’, ‘3’, ‘4’, ‘5’, ‘6’ and ‘7’ in ascending priority.

### Port VLAN ID

VLAN ID is the sequence number of a VLAN. The setting of the VLAN ID depends on ‘Belongs to VLANs’ option. Thus, you should first configure the VLAN table through “VLAN config” option and then specify this value.

### Port State

Port state is for enabling or disabling the switch operation of the chosen port. If it is ‘enabled’, the chosen port will receive and forward the packets, and learns the respective source MAC Addresses. If it is ‘disable’, the chosen port will not receive or forward any packets or learn source MAC Addresses. It should be noted that if the cpu port (i.e. the switch port connected to the management workstation) is disabled, without doubt, the communication link between user and the switch will not proceed further. It

is recommended to locate the link your PC used before disable the port state.

### Flow Control

This feature enables or disables the Flow Control function of the port. Flow control can eliminate frame loss by "blocking" traffic from end stations or segments connected directly to the switch when its buffers fill. IEEE 802.3x flow control is used for full duplex. Note that flow control should not be used if a port is connected to a hub.

## 3.4 VLAN Config

The management switch supports Virtual LAN, which logically group the connection into VLANs for traffic isolation and security purposes. Both tagged and untagged based VLAN are supported with a total maximum of 32 groups. Each VLAN group only forwards traffic within its member ports. For tagged VLAN, each port can be a member of more than one VLAN group and it also supports priority with eight levels. There is also provision for creating an untagged VLAN which support a connection with a legacy untagged port. The VLAN configuration feature also allows you to build, delete and view tagged / untagged VLAN groups and setting priority for tagged VLANs. The range of VID starts from 2 to 4094, as VID 001 is the default for Group 1.

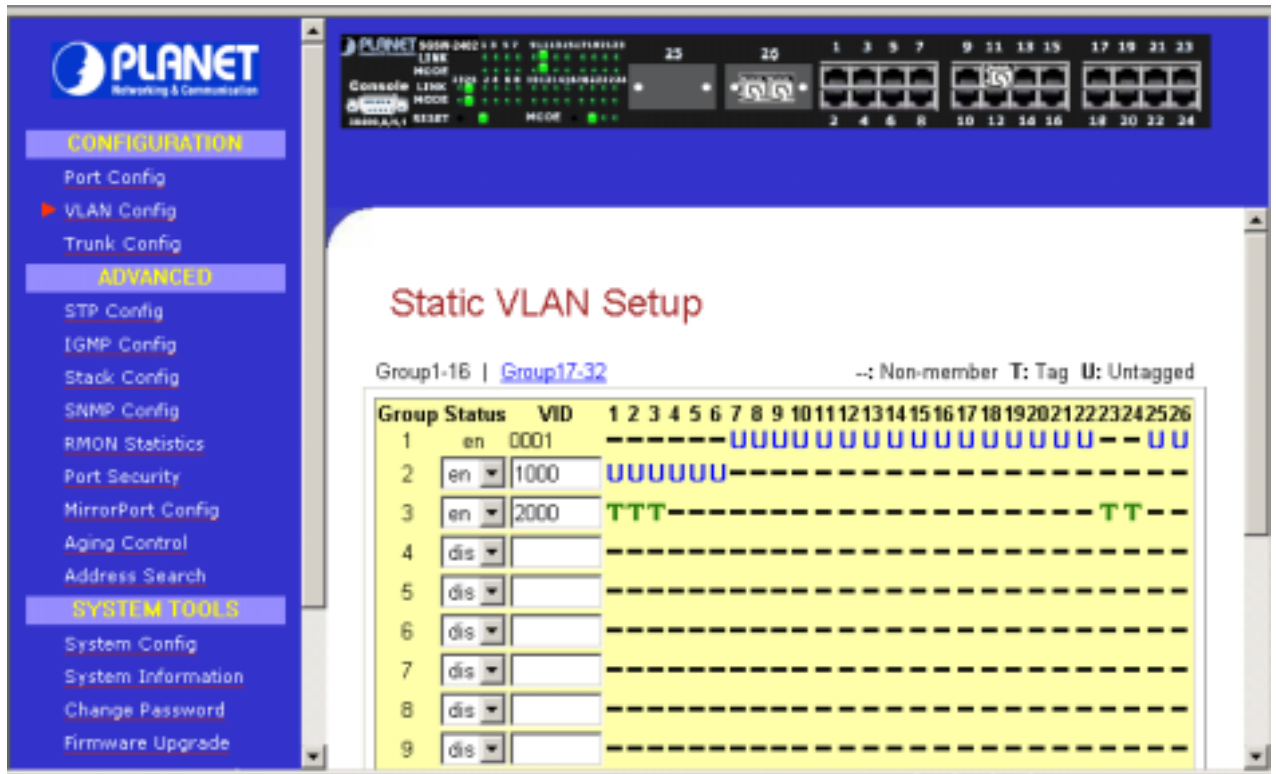


Figure 3-4 The VLAN config Page

### Setup Procedures

- Step 1:** Decide which Group you want to set for monitoring using mirror port. Click status column for that particular group and key in the VLAN ID.
- Step 2:** Next, click on the dashed line '-' to select either "T" for Tagged or "U" for Untagged.
- Step 3:** Hit on "Apply" button after you satisfied with the setup. Click "Save" button to update the latest configuration.

### 3.5 Trunk config

Port Trunking is the ability to group together several switch ports to increase the bandwidth between the management switch and other switch. This is an inexpensive method to increase throughput between switches (or to servers). We define the Port Trunking as the ability to group a set of ports into a single logical link. The port trunk acts as single link between switches. It doesn't create a loop even though it is physically connected as such.



Figure 3-5 The Port Trunk config Page

#### Port Trunking Setup Procedures

**Step 1:** You can choose up to 4-port for Trunking by selecting '-' as "T"

**Step 2:** Click on "Apply" button to make the configuration effective.

**Step 3:** Click "Save" button to save the latest setting.



If you select more than 4 ports for trunking, the following error message will appear:

**NOTE**



Click "OK" button and select the ports again



### 3.6 Advanced Configuration

The available options in “Advanced menu” are:

STP Config	The Spanning Tree Setup Screen
IGMP Config	The IGMP Setup Screen
Stack Config	The Stack Setup Screen
SNMP Config	The SNMP Setup Screen
RMON Statistics	Show RMON statistics information
Port Security	The Port Security Setup Screen
MirrorPort Config	The Mirror Port Setup Screen
Aging Control	The Aging Control Setup Screen
Address Search	The Address Search Setup Screen

### 3.7 STP Config

STP Config provides two menu page to configure: STP Port and STP Bridge

#### 3.7.1 STP Port

##### Bridge Port

This option shows the port of the bridge that connects to the root bridge.

##### Path Cost

This parameter is used by the STA algorithm to determine the best path between devices. Therefore, lower values should be assigned to ports attached to faster media, and higher values assigned to ports with slower media. (Path cost takes precedence over port priority.)

The default and recommended range is: Ethernet: 100 (50~600) Fast Ethernet: 19 (10~60) Gigabit Ethernet: 4 (3~10). The allowed range is 0 - 65535.

##### Priority

Defines the priority for the use of a port in the Spanning Tree algorithm. If the path cost for all ports on a switch are the same, the port with the highest priority (i.e., lowest value) will be configured as an active link in the Spanning Tree. Where more than one port is assigned the highest priority, the port with lowest numeric identifier will be enabled. The range is 0 - 255.

#### Setup Procedures

**Step 1:** Select any one of the ports, from 1 to 26, to connect to the root bridge.

**Step 2:** Key in the value for Path Cost.

**Step 3:** Set the priority level.

### 3.7.2 STP Bridge

This page lets you to have a clearer view in Spanning Tree parameters for whole switch.

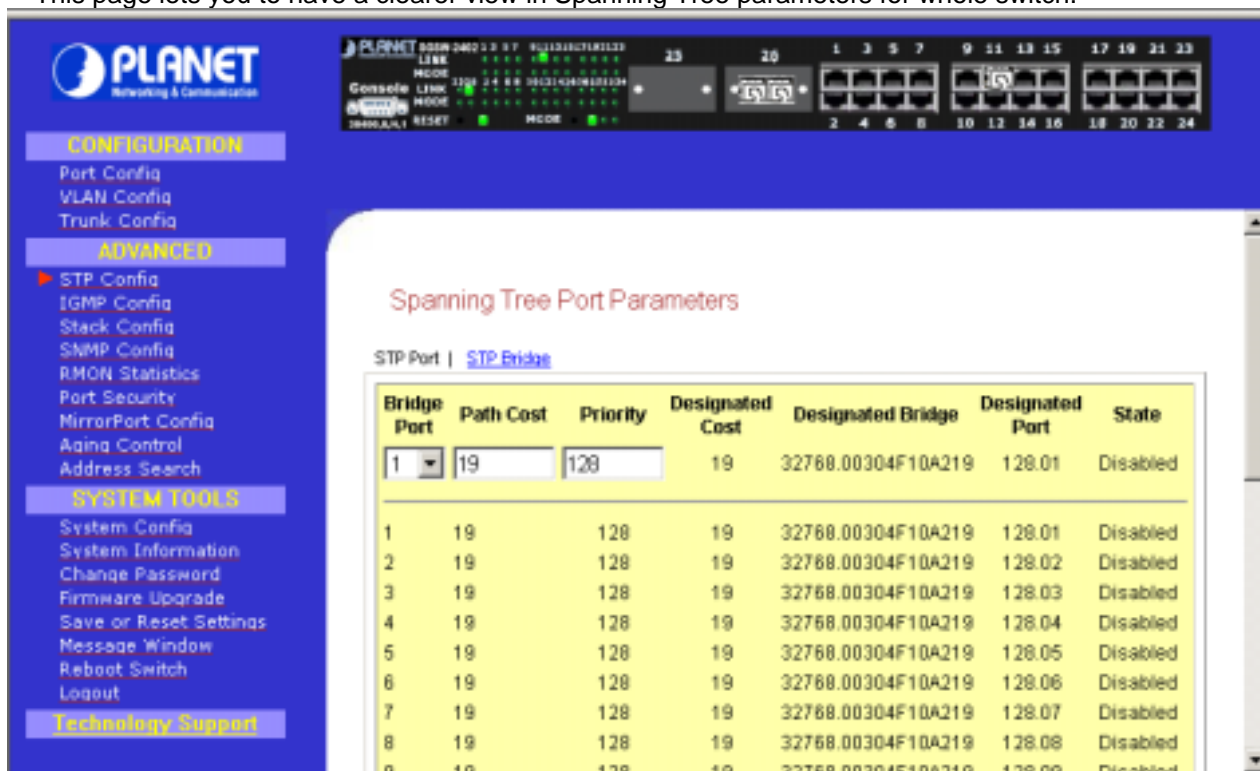


Figure 3-6 The Spanning Tree Screen

#### Description of Parameters

##### STP State

When STP is enabled, it will dynamically detect network looping owing to mis-configuration of the network topology. The redundant connectors will be disabled to avoid looping of packets. Looping would often result in flooding of broadcast packets, halting the normal traffic.

##### Root Priority

Device priority is used in selecting the root device, root port, and designated port. The device with the highest priority becomes the STA root device. However, if all devices have the same priority, the device with the lowest MAC address will then become the root device.

##### Hello Time

The Hello time of the Spanning Tree field shows the number of seconds between the transmissions of Spanning Tree protocol configuration messages.

##### Forward Delay

The Forward Delay field shows the number of seconds a port waits before changing from its Spanning Tree Protocol learning and listening states to the forwarding state. This waiting is necessary so that other switches on the network ensure no loop is formed before they allow other port to forward packets.

##### Max Age

The maximum age time of the Spanning Tree shows the number of seconds the bridge waits without receiving Spanning Tree Protocol configuration message before attempting a reconfiguration.

#### Setup Procedures

**Step 1:** Select Spanning Tree state option, either to enable or disable it.

**Step 2:** Set Root Priority from 0 s – 65535 s, and Hello Time from 1 s – 10 s.

**Step 3:** Key in the Forward Delay Time, Maximum Age and Hello Time.

**Step 4:** Click “Apply” button and save it if everything is OK.



**NOTE**

The screen is divided into two sections. Current Spanning Tree Root section displays the read-only Spanning Tree settings for the current root switch and the parameters this switch is to use when it becomes the root switch.

### 3.8 IGMP

Internet Group Management Protocol (IGMP) is an Internet **protocol** that provides a way for an Internet computer to report its **multicast** group membership to adjacent **routers**. It allows the management switch to forward multicast traffic intelligently. The switch "snoops" the IGMP query and report messages and forwards traffic to only the ports that request the multicast traffic. This prevents the switch from broadcasting the traffic to all ports and possibly affecting network performance.

The membership of a host group is dynamic - hosts may join and leave groups at any time. There is no restriction on the location or number of members in a host group. A host may be a member of more than one group at a time. A host need not be a member of a group to send datagrams to it.

#### Host Group Addresses

Host groups are identified by class D IP addresses, i.e., those with "1110" as their high-order four bits. Class D IP addresses, i.e., those with "1111" as their high-order four bits, are reserved for future addressing modes.

In Internet standard "dotted decimal" notation, host group addresses range from 224.0.0.0 to 239.255.255.255. The address 224.0.0.0 is guaranteed not to be assigned to any group, and 224.0.0.1 is assigned to the permanent group of all IP hosts (including gateways). This is used to address all multicast hosts on the directly connected network. There is no multicast address (or any other IP address) for all hosts on the total Internet. The addresses of other well-known, permanent groups are to be published in "Assigned Numbers".



Figure 3-7 The IGMP Screen page

#### 3.8.1 IGMP Management

To activate IGMP function,

**Step 1:** Select “enabled” in the IGMP state field.

**Step 2:** Click on the radio button to select the version for IGMP.

**Step 3:** Hit on the “Apply” button and save your setting.

#### 3.8.2 Definition on IGMP v1.0 and v2.0

##### For IGMP v1.0,

The Internet Group Management Protocol (IGMP v1.0) is used by IP hosts to report their host group memberships to any immediately neighboring multicast routers. IGMP is an asymmetric protocol and is specified here from the point of view of a host, rather than a multicast router.



**NOTE**

IGMPv1 has no leave mechanism. If a host no longer wants to receive the traffic, it simply quits. If it is the last, the router will not have any answers to its query and will delete the GDA for that subnet.

##### For IGMP v2.0,

IGMP v2.0 allows group membership termination to be quickly reported to the routing protocol, which is important for high-bandwidth multicast groups and/or subnets with highly volatile group membership.

Multicast routers use IGMP v2.0 to learn which groups have members on each of their attached physical networks. A multicast router keeps a list of multicast group memberships for each attached network, and a timer for each membership. "Multicast group memberships" means the presence of at least one member of a multicast group on a given attached network, not a list of all of the members.

When a host receives a General Query, it sets delay timers for each group (excluding the all-systems group) of which it is a member on the interface from which it received the query.

When a router receives a Report, it adds the group being reported to the list of multicast group memberships on the network on which it received the Report and sets the timer for the membership to the [Group Membership Interval].

When a host joins a multicast group, it should immediately transmit an unsolicited Version 2 Membership Report for that group, in case it is the first member of that group on the network

When a host leaves a multicast group, if it was the last host to reply to a Query with a Membership Report for that group, it SHOULD send a Leave Group message to the all-routers multicast group.

### 3.9 Stack

Stacking function is convenient for administrator to manage multiple switches by single IP. Basically, you got to have min. 2 units,

**Step 1:** linking the switches by one category 5 or fiber cable.

**Step 2:** Choose either one management switch as Master switch, key in its IP number (ex:203.70.249.152).

**Step 3:** Choose "Stack Config".

**Step 4:** Choose "enable" of Stacking State, and "Save".

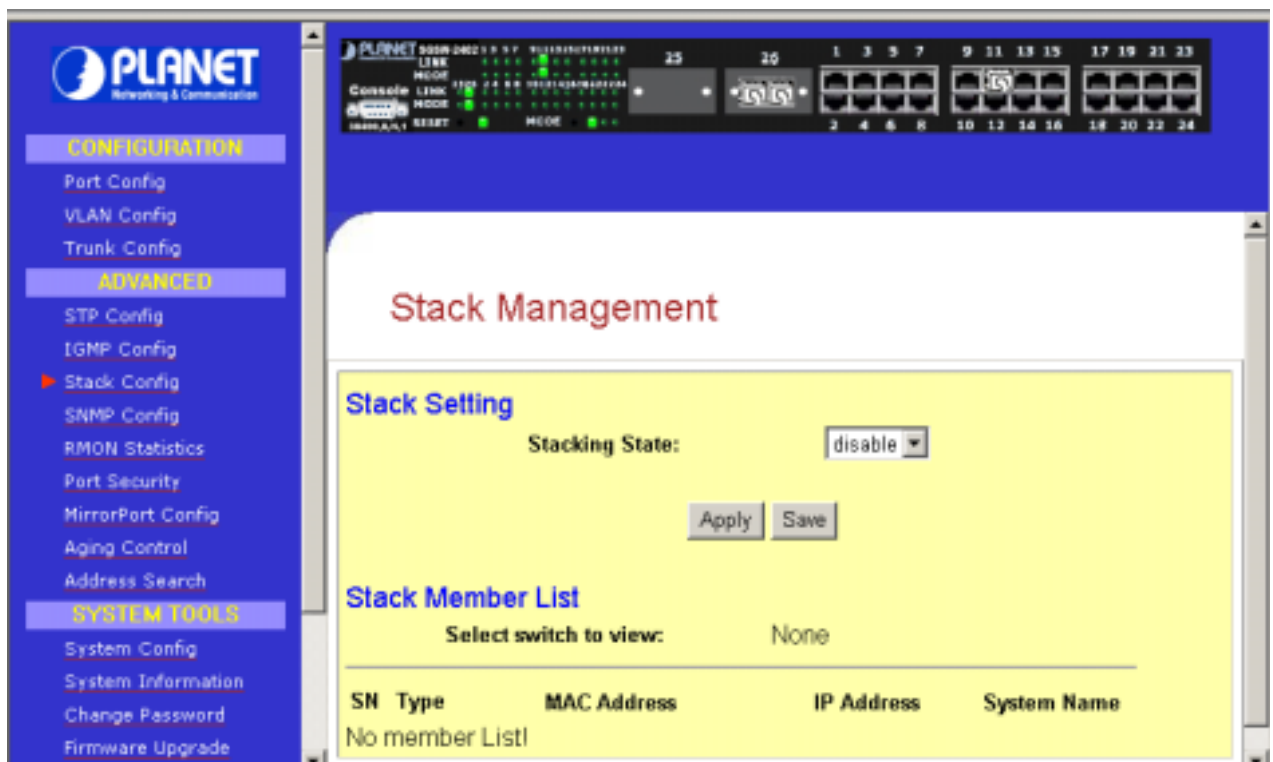


Figure 3-8 The Stack screen page

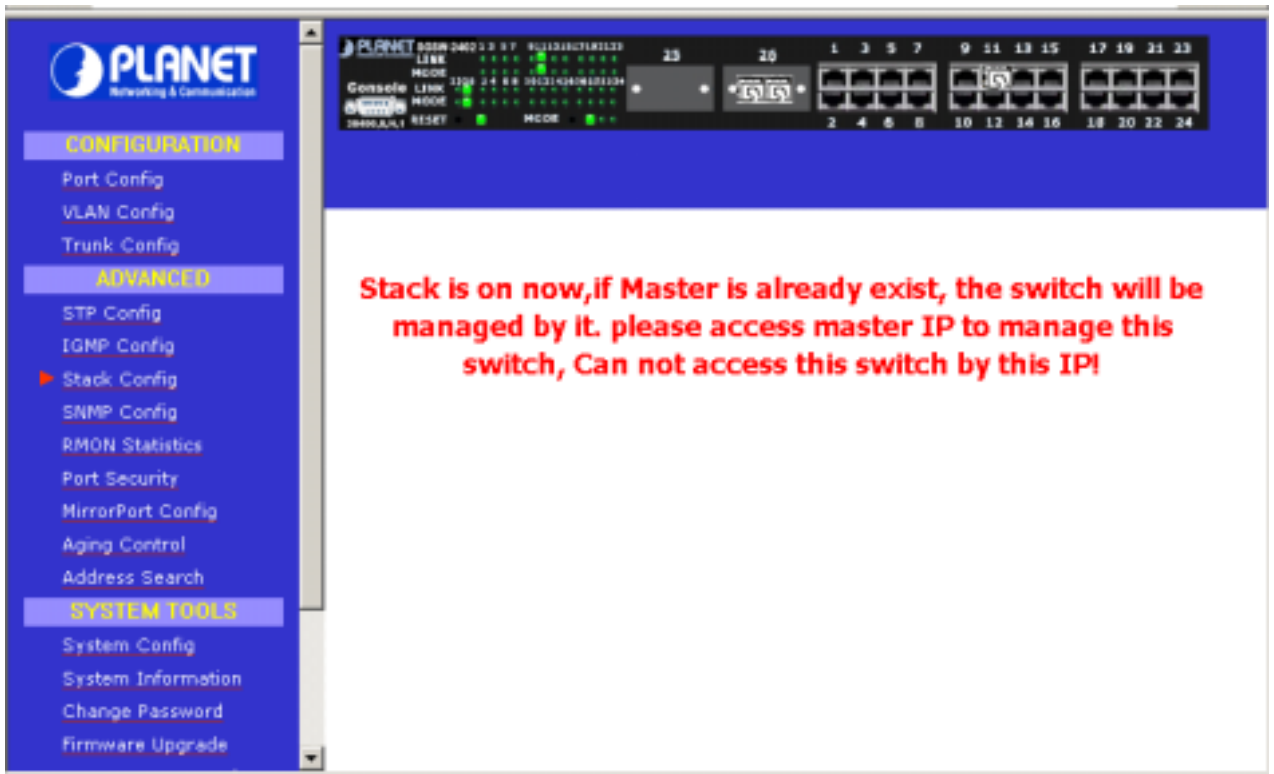


Figure 3-9 The Stack screen page

**Step 5:** enter another unit management switch IP (ex:203.70.249.154) as Slave switch.

**Step 6:** choose "Stack Config"

**Step 7:** choose "Enable" of Stacking State, and "Save".

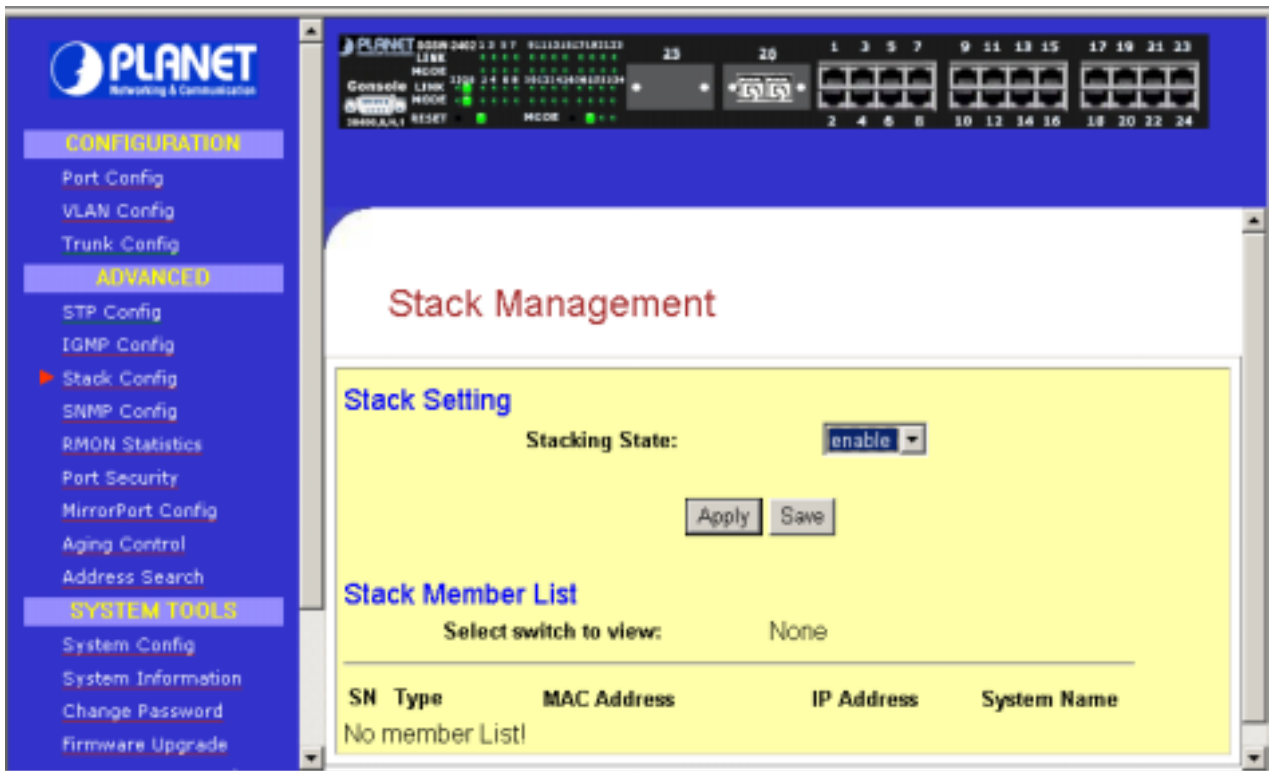


Figure 3-10 The Stack screen page



Slave switch IP will be covered by Master one, and disappear temporarily. The slave IP address can be the same as Master IP address. Thus, if master switch is malfunction, you can still access the other switch by same IP address.

You can key in Master IP (ex:203.70.249.152), and choose “Stack Config”, then all the stack member list will be displayed. You can then choose the switch you want to configure from the “Select switch to view” list.



If you have difficulty on selecting another switch, you may be connecting to the slave switch’s web, please close the browser window, use the “arp -d \* ” DOS command to clear the ARP table and then reopen the web.

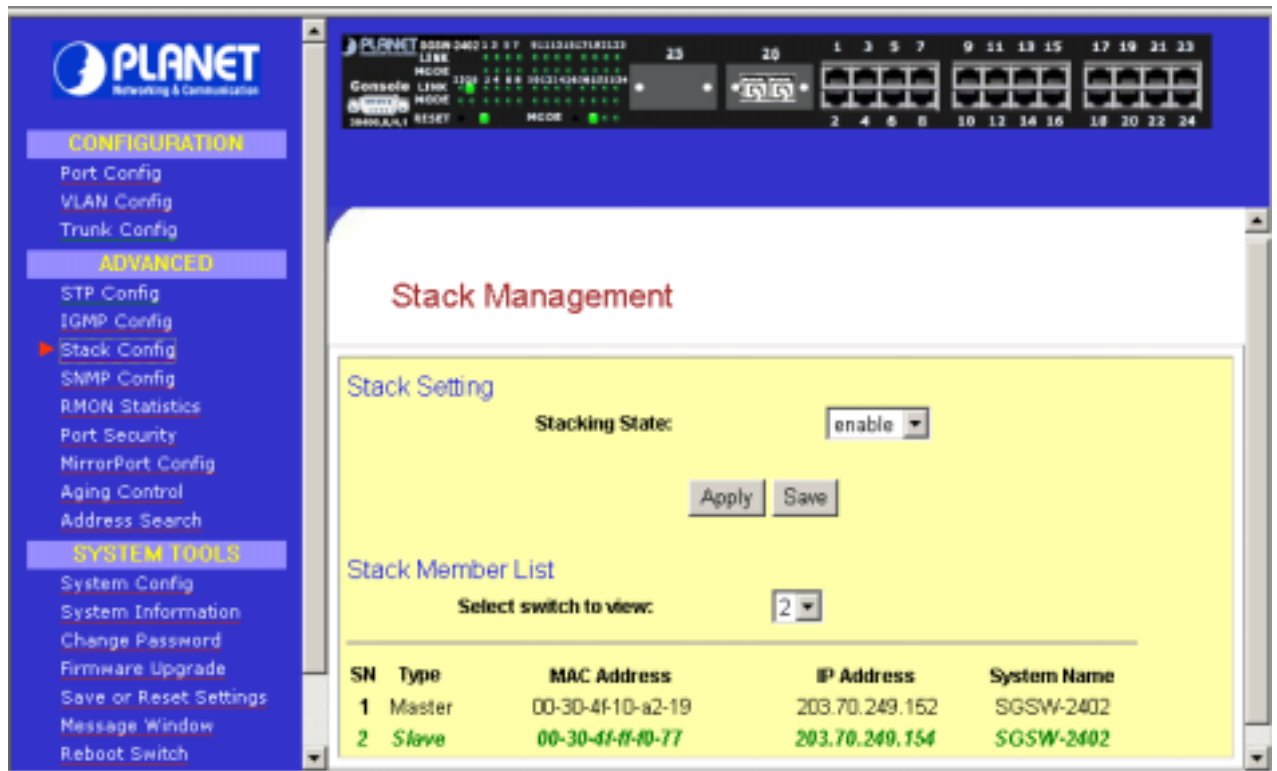


Figure 3-11 The Stack screen page

### 3.10 SNMP

The management switch provides Simple Network Management Protocol (SNMP) over the UDP/IP transport protocol as defined in RFC 1517 for network management applications.

To control the access of the system, a list of community entries is defined. Each community entry consists of a community string and its access privilege. The Access privilege is either “Read Only” or “Read-Write”. Only SNMP messages with correct community string and allowable operation are responded by the system. The community list is configurable by all management operations. Only SNMP community with “Read-Write” can view the whole list and make modifications. A “Read Only” community can only see its own community entry.




In a stack environment, for master switch to know which switch you want to view and set by SNMP, either the switches’ IP or community name must be different. Thus, if you have stacked several switches by single IP, their community name must be different.

Trap messages are generated to report system events spontaneously as defined in RFC 1215. The system can generate traps defined in the MIB it supports.

A list of “Trap Receivers” is defined in management as the target of each trap message. A Trap Receiver

is a network node that deserves the trap message sent by management switch. A Trap Receiver entry contains the IP address of the node and a community string that is included in the trap message. When an event arises that requires a trap message to be sent, it is sent to every node listed in the Trap Receiver.

 **NOTE** If you are configuring slave switch's SNMP settings, please reboot the switch after making any configuration.

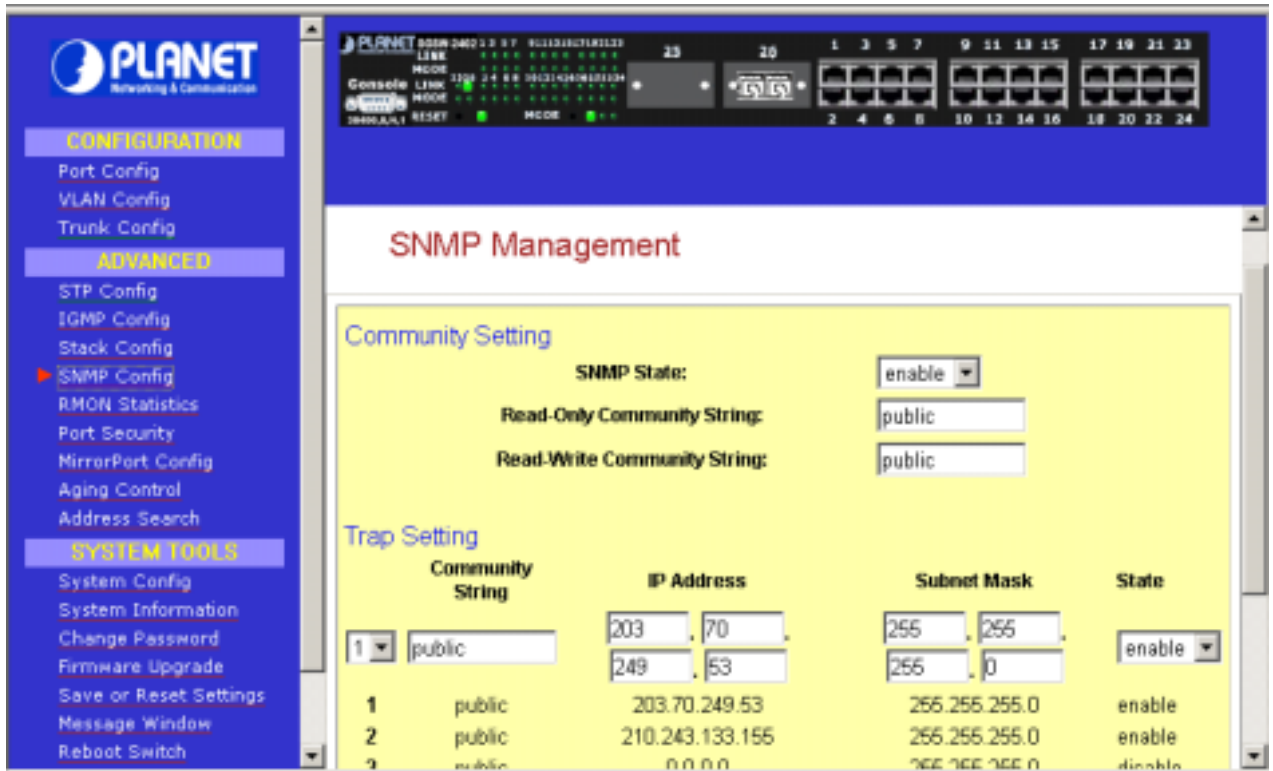


Figure 3-12 The SNMP screen

### 3.11 RMON Statistics

This function allows to display all port's RMON Statistics

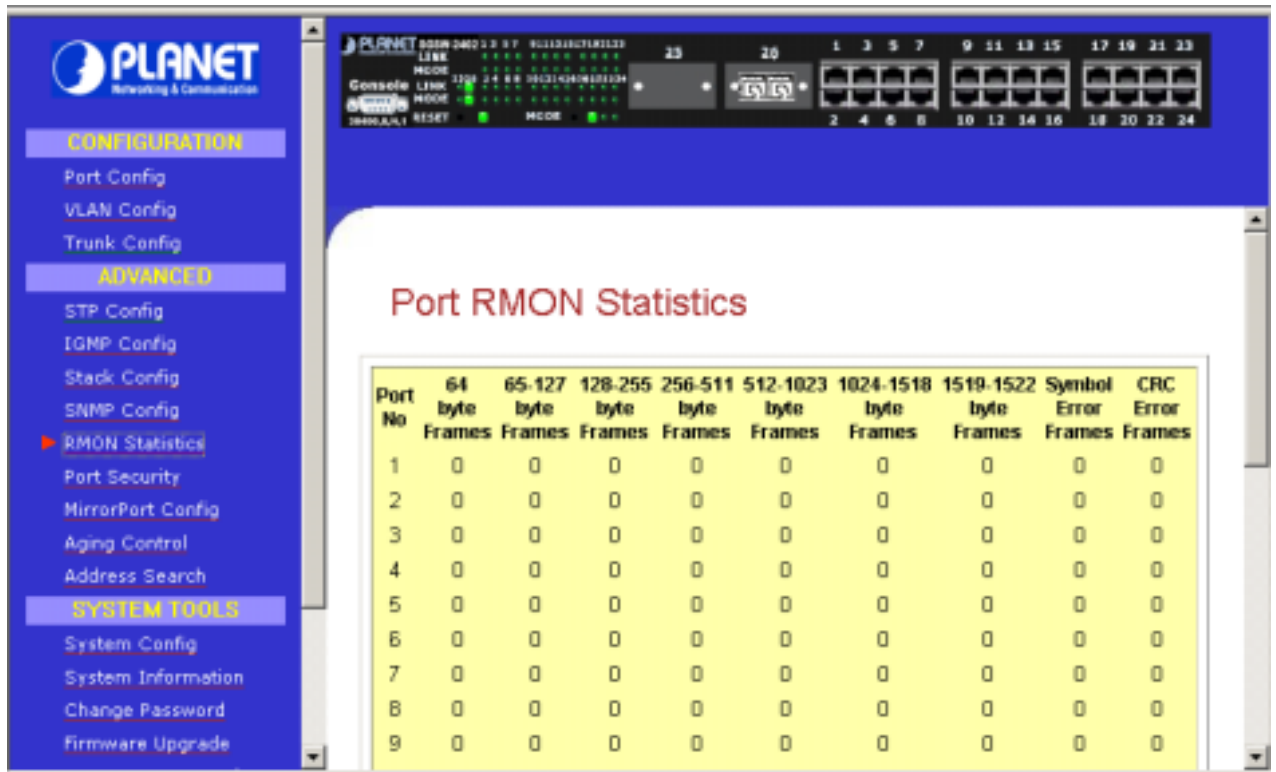


Figure 3-13. RMON Statistics page

### 3.12 Port Security

Of all 26 ports, some of the end nodes may need to assign to the specific port. In order to fulfill this act, MAC Address should be added to that particular port. This is to ban other users from using the static port. A port can accommodate up to 20 MAC Addresses.

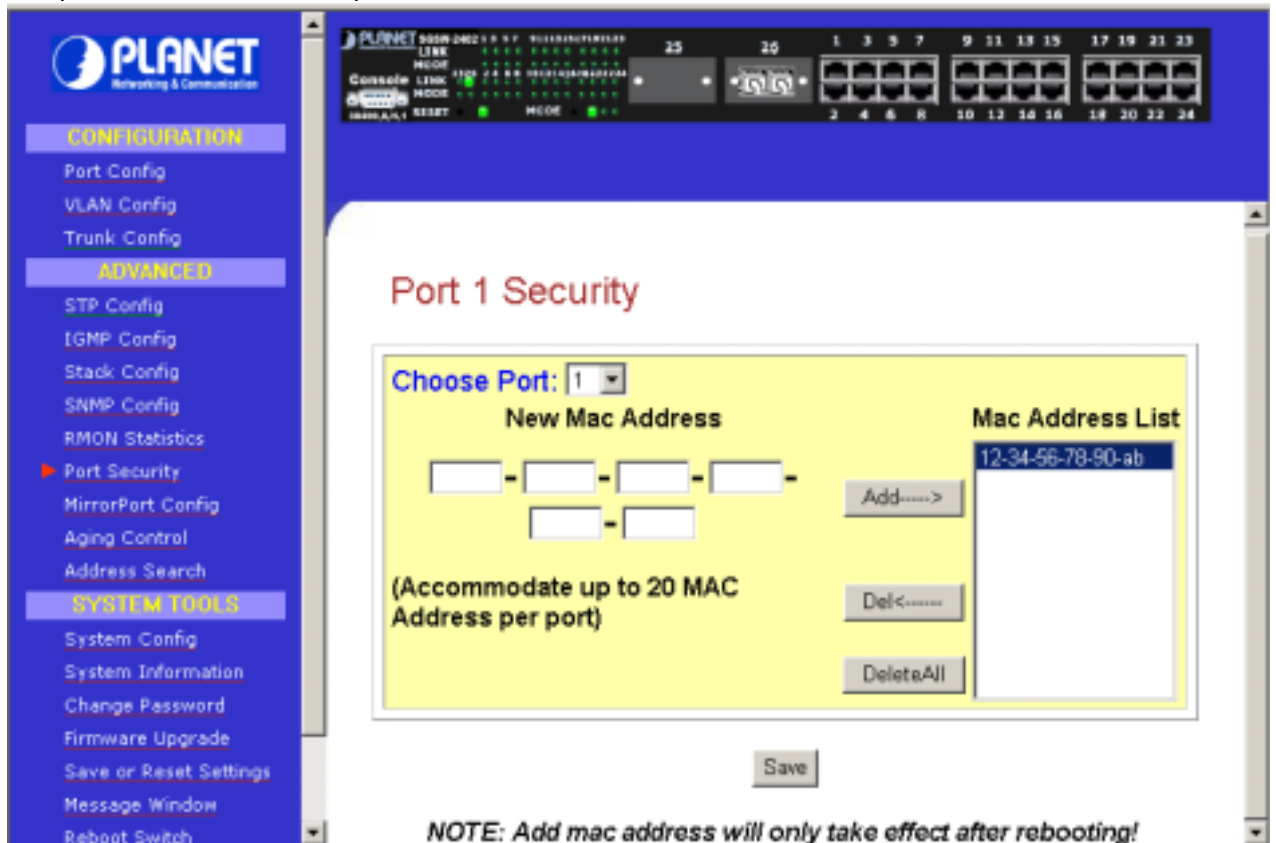




Figure 3-14. Port Security page

### 3.12.1 Setting Up Procedures

**Step 1:** Select the port that you want to add in the MAC Address

**Step 2:** Key in the MAC Address in the field provided, e.g. 00-80-40-E8-85-12, and click "Add" button  
The system will then add in the New MAC Address into the listing on the right side of the screen.

### 3.12.2 Delete MAC Address

If you want to delete MAC Address(es), simply follow the procedures shown below:

#### For deleting individual MAC Address

**Step 1:** Select a MAC Address and click on "Del ->" button.

The system will prompt you to confirm your action:



**Step 2:** Choose "OK" button to confirm.

The particular MAC Address will be successfully deleted!

#### For deleting ALL MAC Addresses

**Step 1:** Click on "Delete All" button and the system will again prompt you the message as shown as above.

**Step 2:** Choose "OK" button to confirm.

All MAC Addresses will be deleted immediately!

## 3.13 Mirror Port

### 3.13.1 Using Mirror Port to Monitor Traffic

This function allows you to set up a 'mirror' port of any specified port(s) or VLAN, such that you can monitor the traffics of the monitored port(s) or VLAN without intervening them. In effect, the traffics on the monitored port(s) VLAN are replicated on the mirror port that you can use a protocol analyzer to analyze the traffic for specific problem.

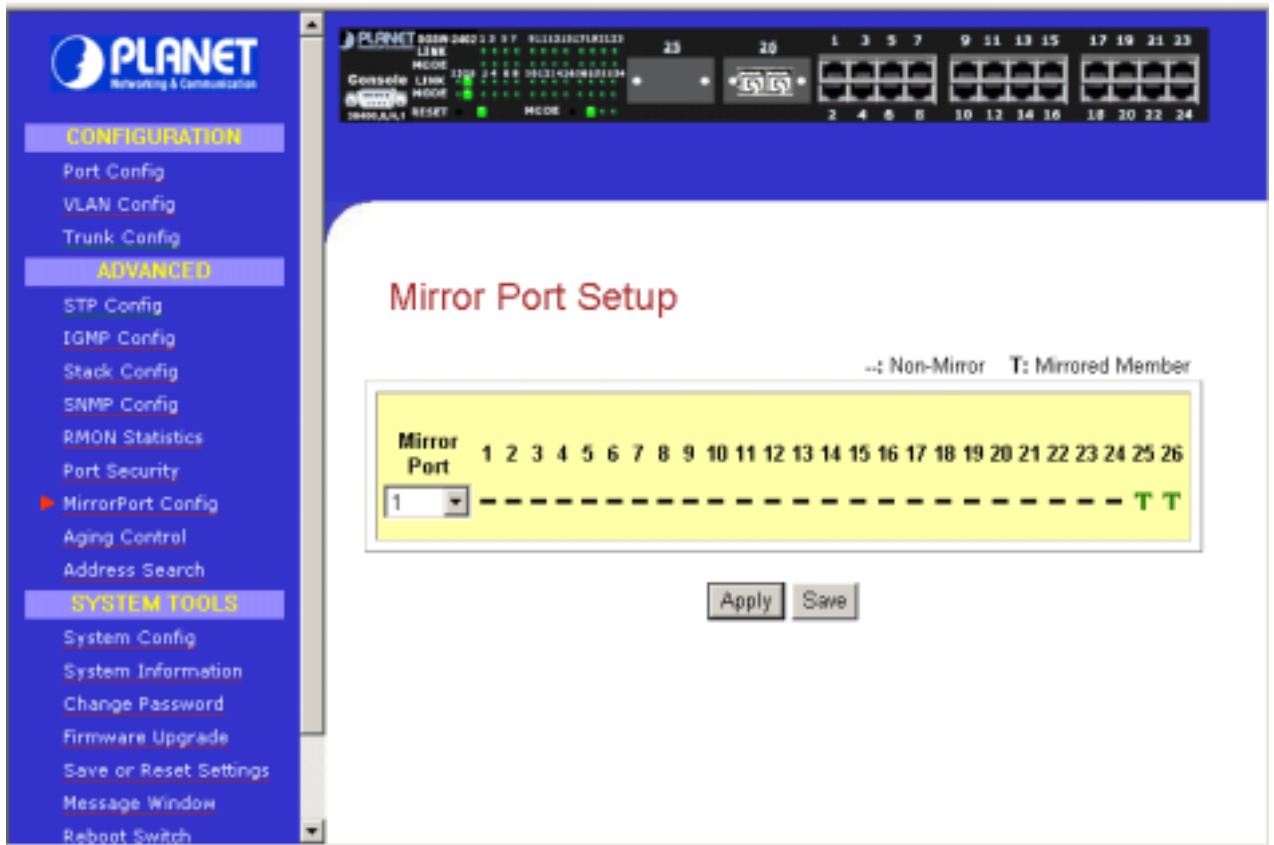


Figure 3-15. Mirror Port Setup screen

### 3.13.2 Setup Procedures

**Step 1:** Select one Mirror Port.

**Step 2:** Click on the dashed line '-' on that particular port if you want to select it as a Mirrored Member (T).

**Step 3:** Hit on "Apply" button after you are satisfied with the setup. Click "Save" button to update the latest configuration.

### 3.14 Aging Control

Aging Control is for the aging of address entries in the switch's forwarding table. If the aging control is enabled, a learned address entry (not included the static entry) will be removed from the forwarding table if there is no update within a pre-determined period (1 ~ 128 x 5 seconds). It is useful because the resource of the forwarding table is limited. Enabling the aging control will not influence packets forwarding, for that the packet is forwarded to all other ports when the destination MAC address cannot be found in the forwarding table. If the aging control is disabled, all address entries will not be removed.



Figure 3-16 Aging Control screen

### Aging Control Configuration Procedures

**Step 1:** Select “Enable” from the Aging Control option.

**Step 2:** Enter an integer in the entry, choosing from the range of 1 to 128, if the aging control is enabled.  
If the aging control is disabled, this step can be skipped.

### 3.15 Address Search

Host Search is for searching a host by IP or MAC address on the whole switch, and getting the port number to which the host is connected. It is useful while configuring the VLAN. With this function, you can easily detect the port at which a host is connected to and have an idea about which ports should be included in a VLAN.

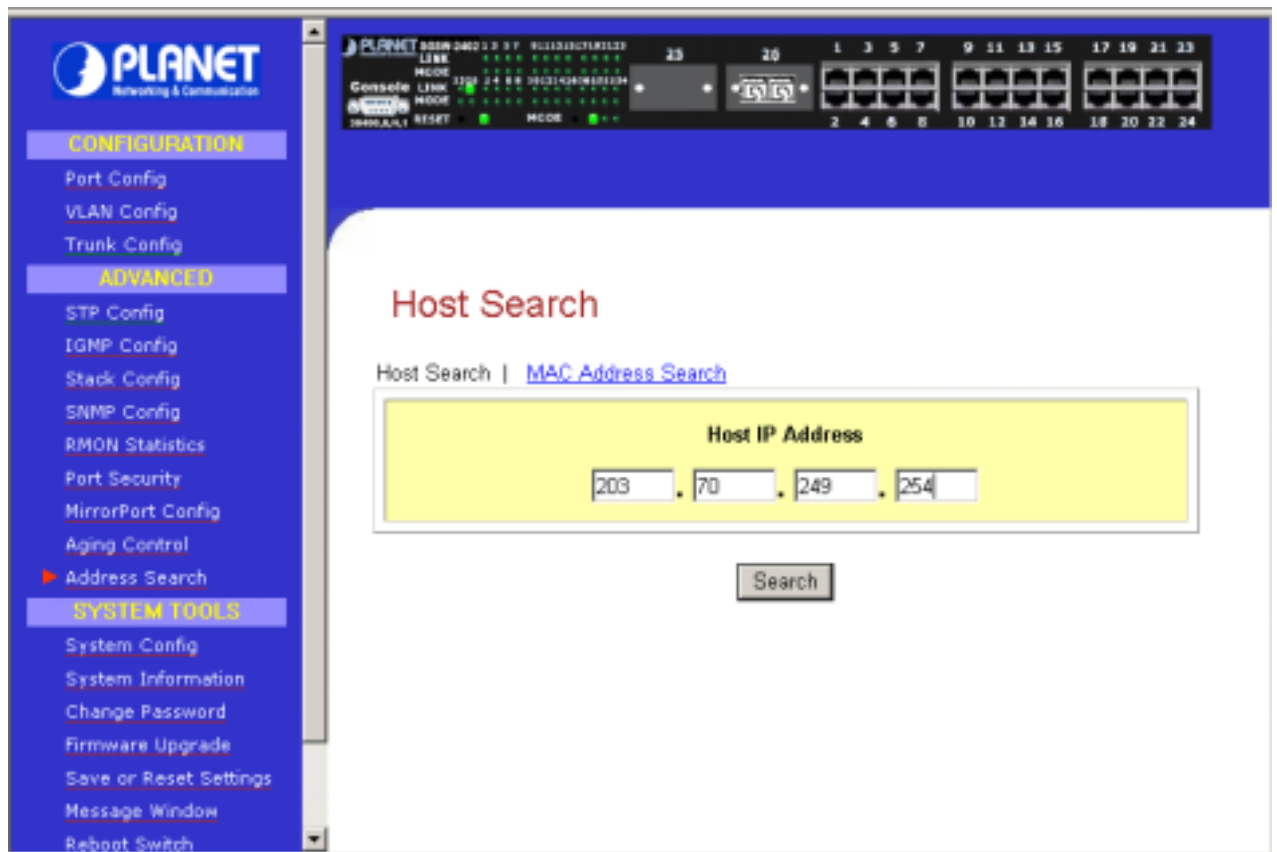


Figure 3-17 The Host search page

### 3.15.1 Host Searching Procedures

**Step 1:** Enter the IP Address of the host.

**Step 2:** Click on “Search” button.

The result will displayed as shown:

## Search Result

---

**The Host Address 203.70.249.254 was found !**  
**MAC Addr: 00-50-54-86-5c-60**  
**port : 26**

---

If the system can not find the Host Address the following GUI will appear:

# Search Result

---

The Host 203.70.249.253 was not found !

---

return

### 3.15.2 MAC Address Search

This feature helps to look for the particular MAC Address stated in the field, which provides a useful way while configuring the VLAN. The system will search through the device for the port's ownership of that particular PC.

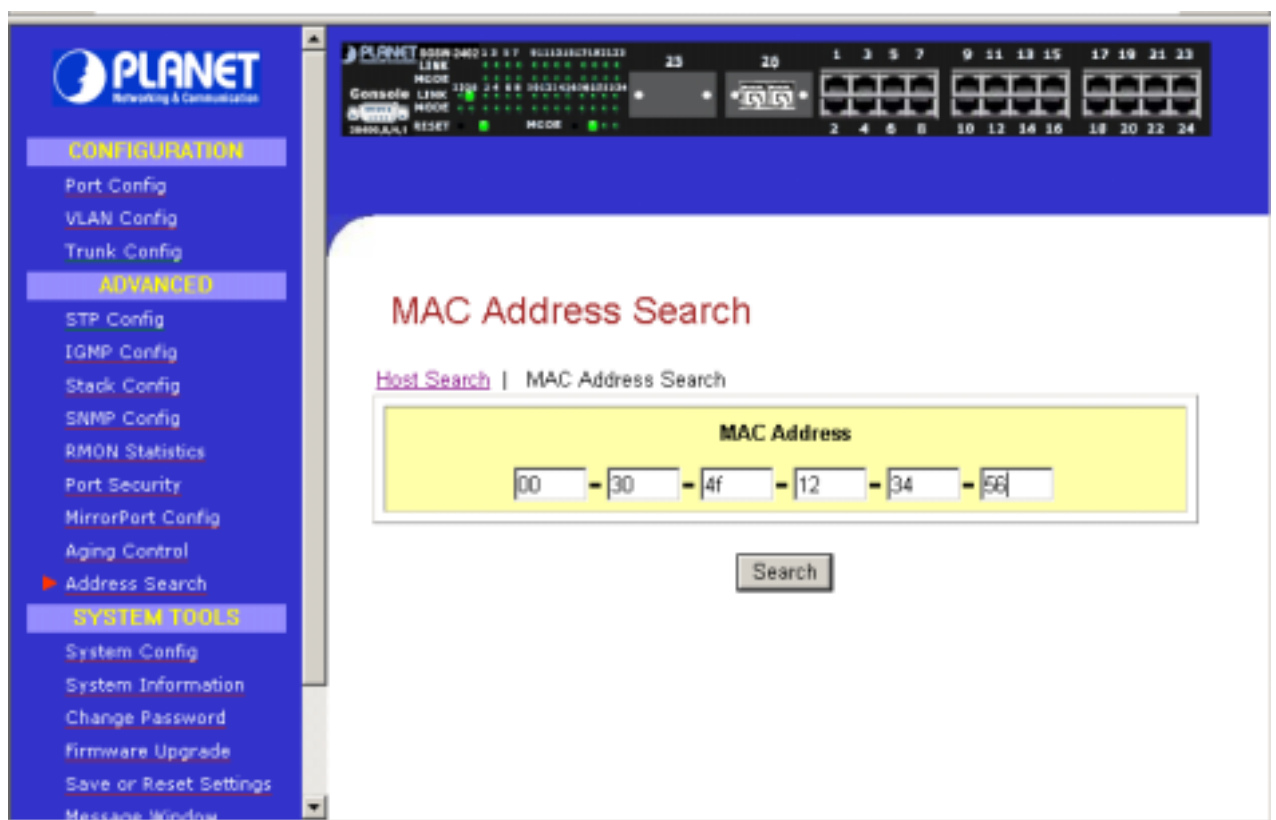


Figure 3-18 The MAC Address search screen

#### MAC Address Search Procedures

**Step 1:** Enter MAC Address in the field provided.

**Step 2:** Click on “Search” button.

If MAC Address was found by the system, the result will appear as:

## Search Result

---

**MAC Address 00-304f-0b-3c-b8 was found.  
port : 26**

---

return

But, if the system cannot find any matching MAC Address, the following search result will appear:

## Search Result

---

**No address was found.**

---

return

### 3.16 System Tools

The available options in “System Tools” are:

System Config	The Spanning Tree Setup Screen
System Information	The IGMP Setup Screen
Change Password	The Stack Setup Screen
Firmware Upgrade	The SNMP Setup Screen
Save or Reset Settings	The Port Security Setup Screen
Message Window	The Mirror Port Setup Screen
Reboot Switch	The Aging Control Setup Screen
Logout	The Address Search Setup Screen

### 3.17 System Config

This page allow configuring the basic switch information and IP address. The configuration procedure is:

**Step 1:** Give a description for the system name and location of this switch.

**Step 2:** Key in the contact information and describe the product of the switch.

**Step 3:** Enter the IP address and Subnet Mask.

**Step 4:** Click “Apply” button and save the setting by hitting “Save” button.

Upon making amendments on this page, the screen will appear a message, “Reboot the switch?”. Click on the ‘Yes’ button to take effect on the changes.

Click on “Logon” button again if you still need to access to the management switch web page. This cannot apply to the changing of IP Address! Please refer to the following notes for details.



**NOTE**

Please note that after changing IP Address of the device, the system will not lead you to log in the management switch web page after you have clicked “Logon” button. Instead, a page error will display on the screen state that “The page cannot be displayed”. Don’t worry! What you need to do is to enter your NEW IP Address to login to the web page

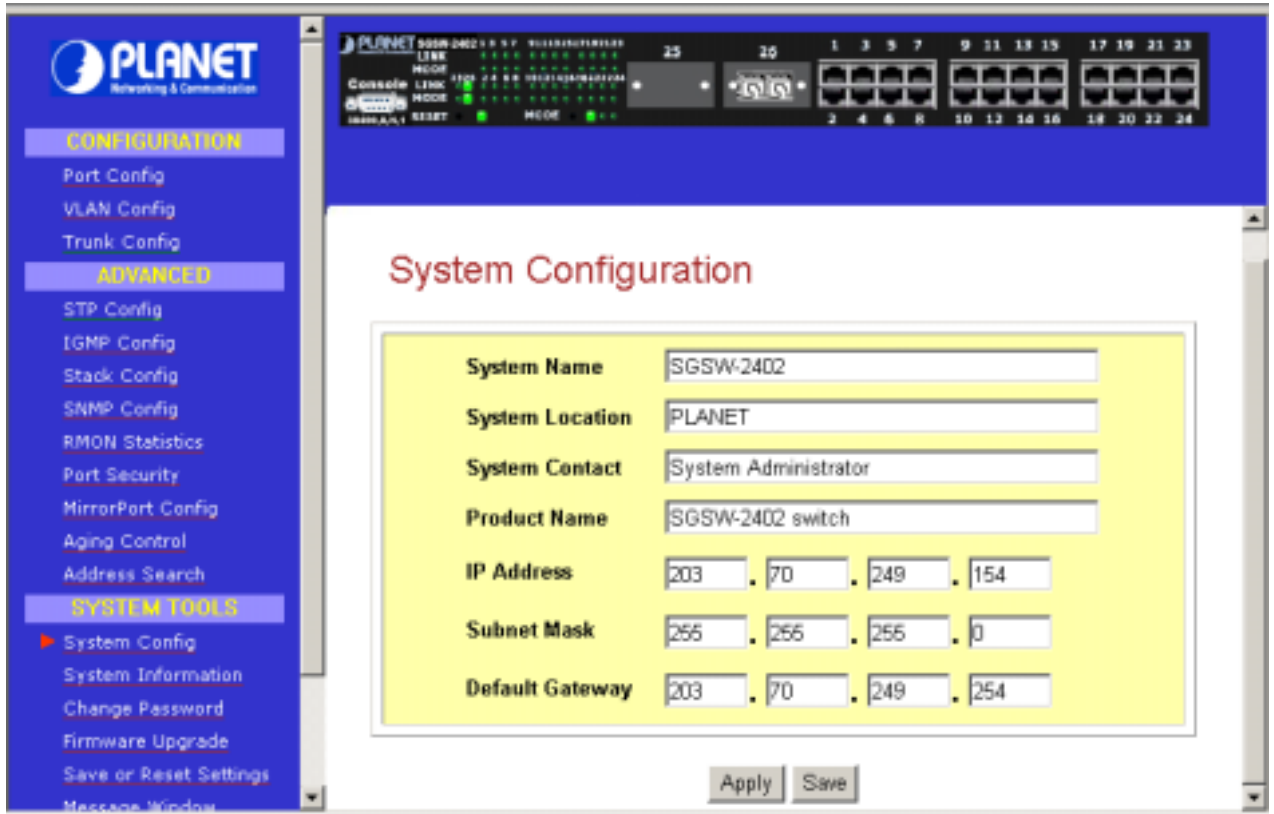


Figure 3-19 System Config screen

### 3.18 System Information

System Information displays the necessary data about the management system.

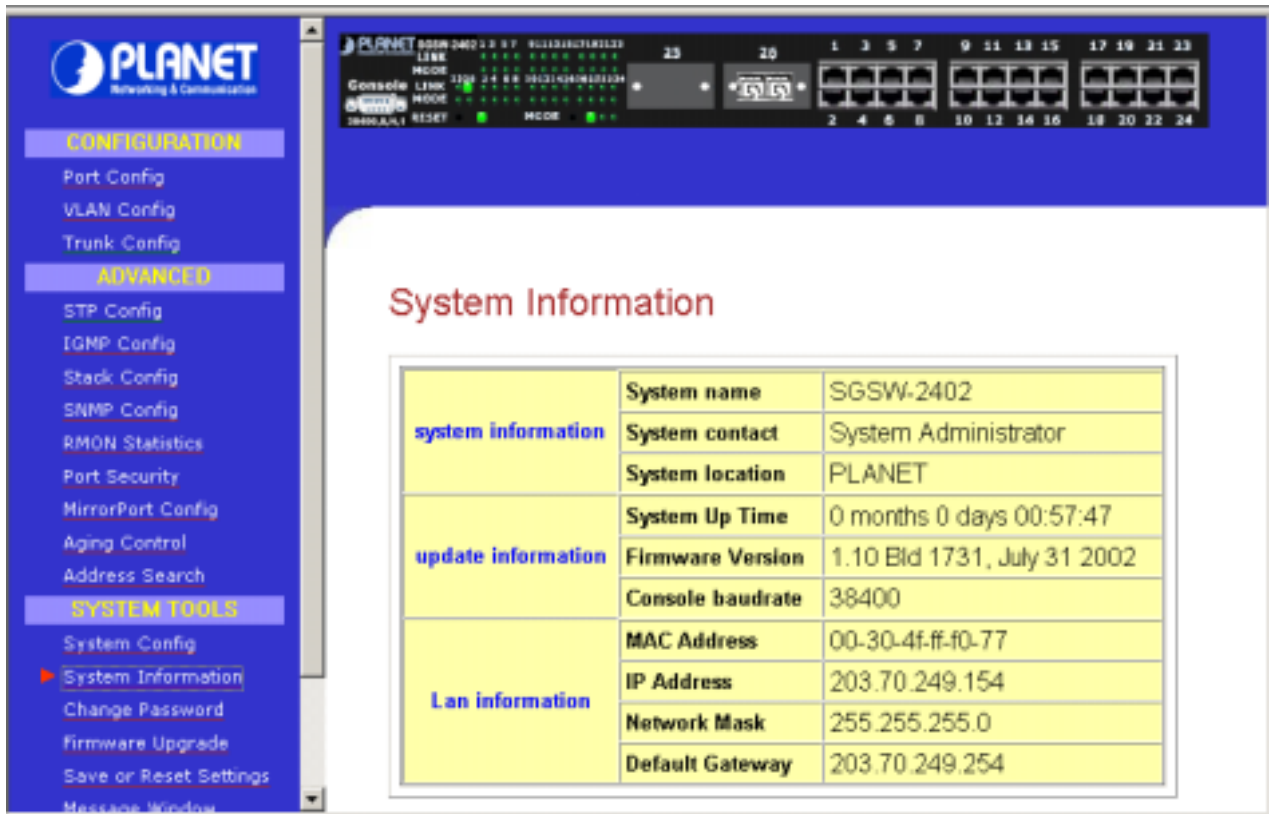


Figure 3-20 The System Information

### 3.19 Change Password

This option allows you to amend the current password.



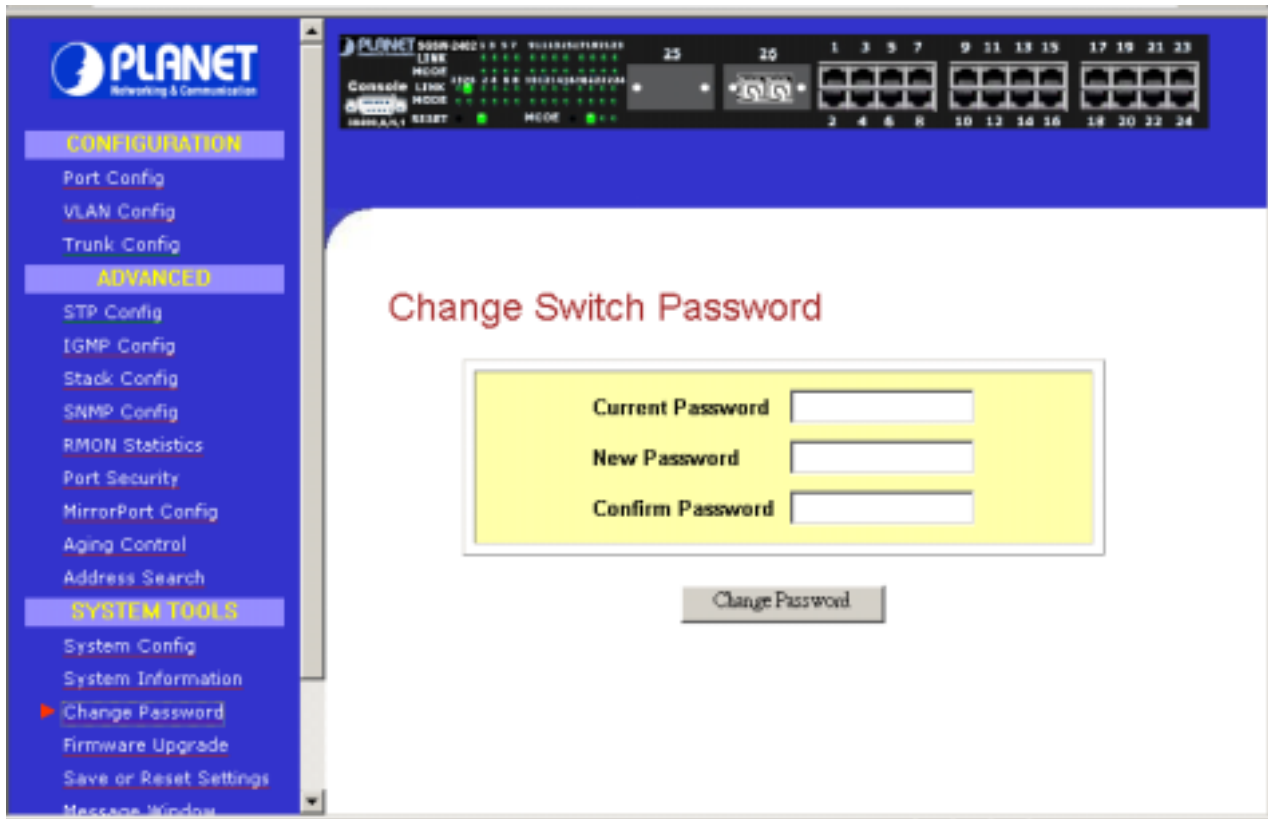


Figure 3-21 The change password screen

### Changing password procedure

- Step 1:** Type in your current password.
- Step 2:** Enter your new password.
- Step 3:** Enter the new password again for confirmation.
- Step 4:** Click on “Changing Password” button to activate the new setting.

If your password is keyed correctly, the system will reply you with a system message, stating that your password has been changed successfully.

## System Messages

---

**The password has been changed.**

---

However, if wrong password is entered any of the error messages shown below will appear:

# System Messages

---

The new password does not match the confirm password.

---

return

# System Messages

---

Password should be an alphanumeric string of size 5 to 15, starting with a letter.

---

return

Hit "return" button and re-enter the password correctly.

## 3.20 Firmware Upgrade

You can simply download the newer version Firmware from [www.planet.com.tw](http://www.planet.com.tw) Here, you will find links that allows easy access for upgrading of future released of updated firmware.

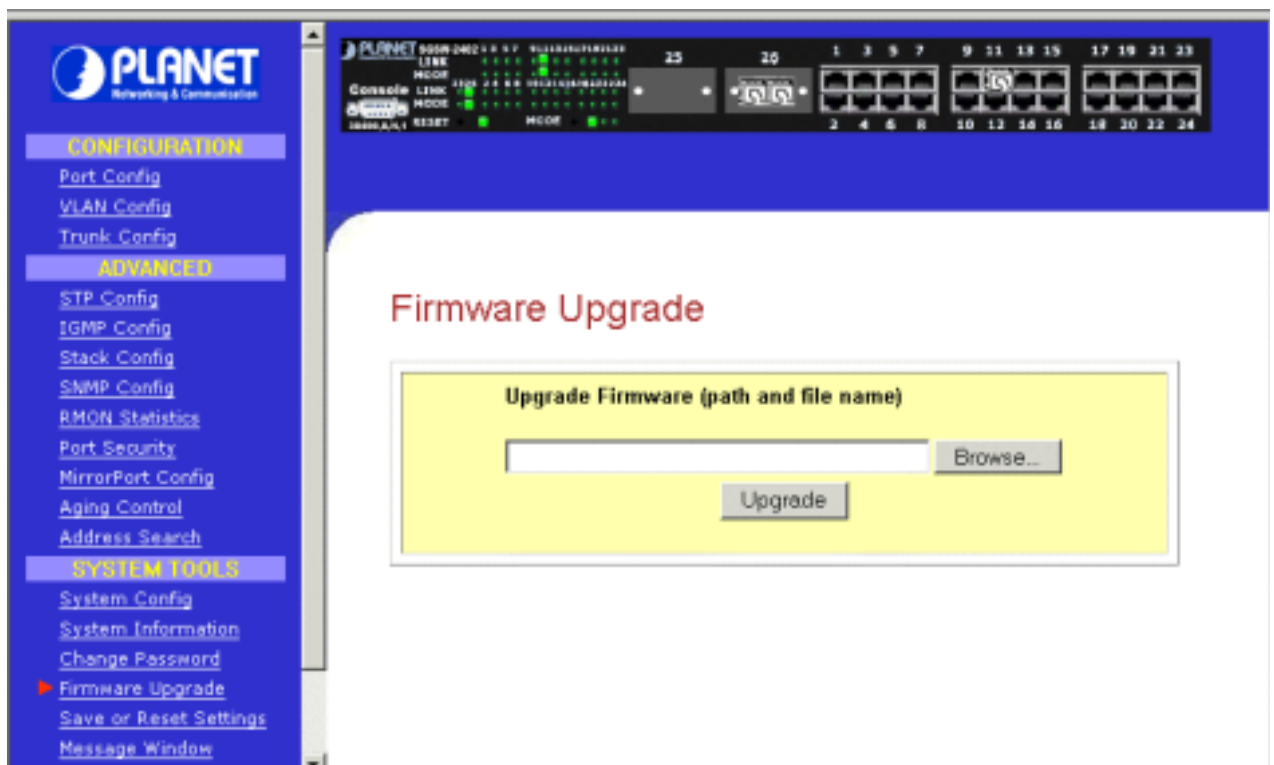


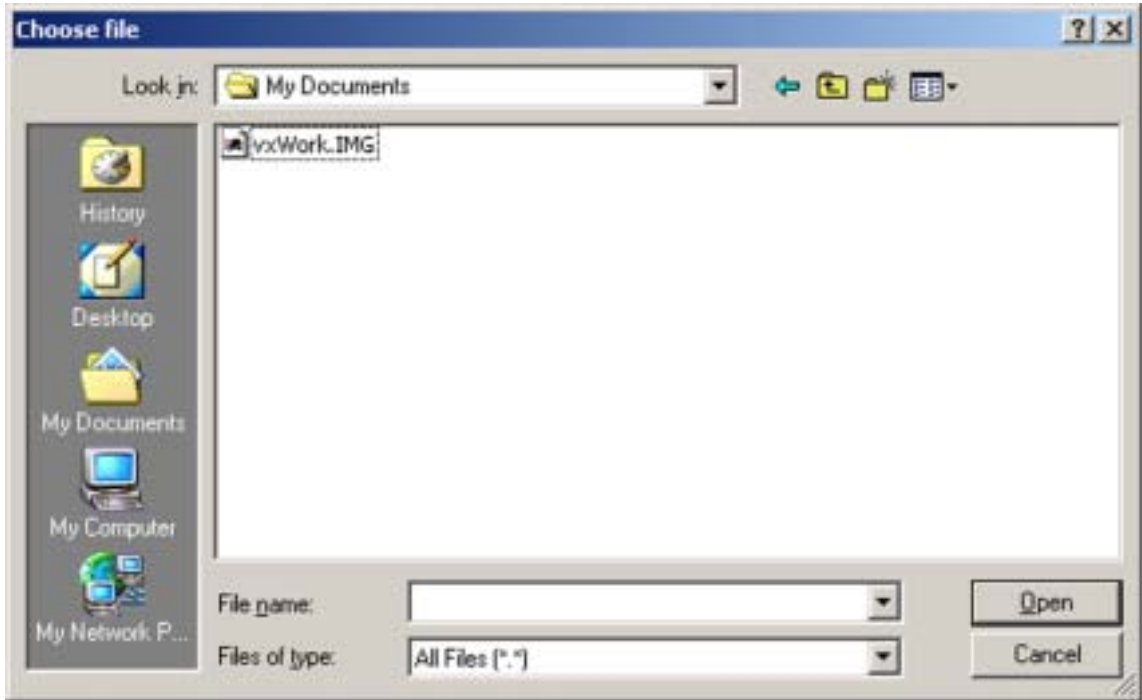
Figure 3-22 The Firmware Upgrade page

To check your current firmware version, click “Knowing the System Information” as mentioned in 3.18 System Information.

After downloading the firmware, saved it into your hard disk.

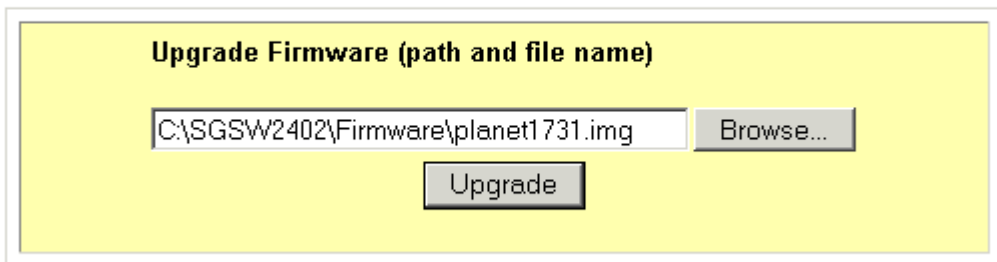
### Upgrade Firmware Procedure

**Step 1:** Click “Browse” button to select the file where you have just saved and ‘Choose file’ dialog box will appear, prompting you to select the file to upgrade the firmware.



**Step 2:** Click “Upgrade” button to start replacing the latest Firmware revision. The system will prompt you reboot the management switch.

## Firmware Upgrade



**Step 3:** Click “Yes” button to restart the device.

## Reboot Switch

Reboot the Switch?

Yes

**Step 4:** Log on the web site after about 60 seconds if you still need to do some configuration on the management switch.



If you are using the same or older version of the firmware, the system will prompt you whether or not to use the firmware. See the GUI shown below:

## Firmware Upgrade

Firmware downloaded is same as or older than the current one. Do you want to use this firmware?

Yes No

On the other hand, if you choose the wrong file, a system message will appear:

## System Messages

---

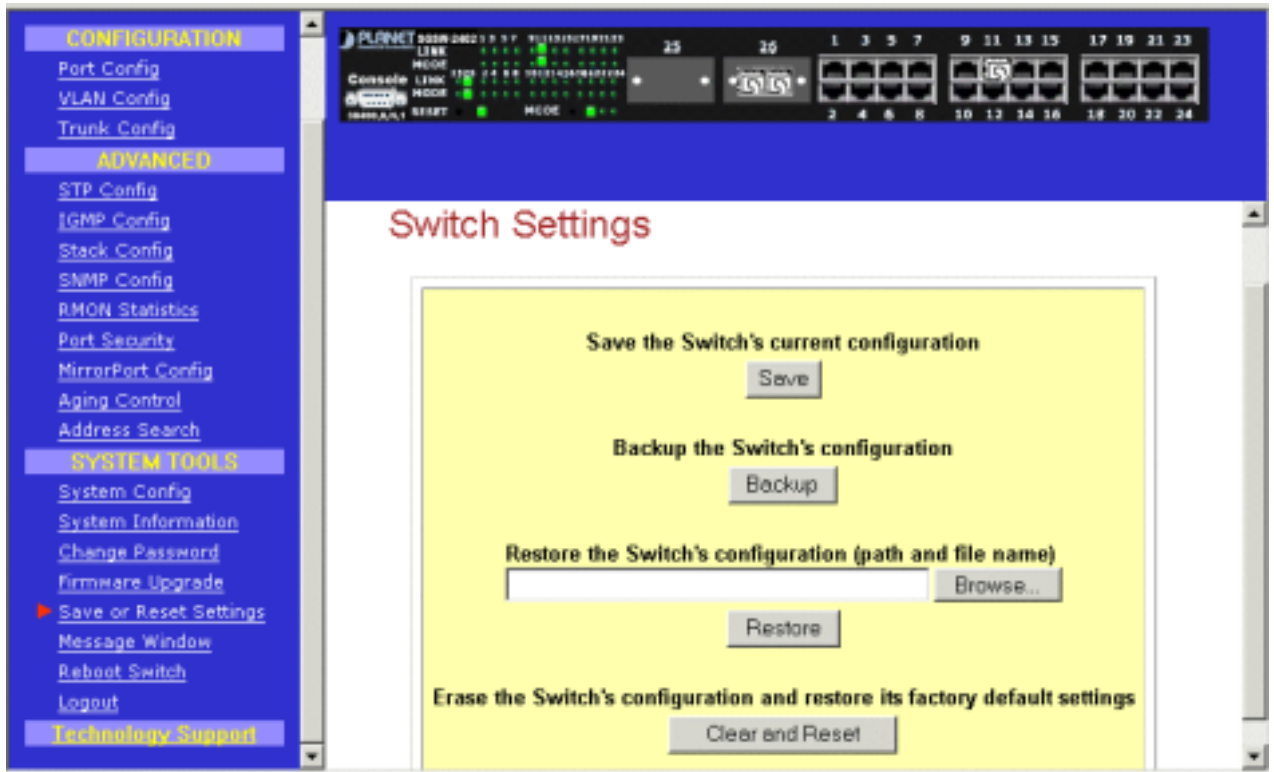
**Firmware downloaded is invalid!Check your firmware file and upload again.**

---

return

### 3.21 Save & Reboot

The Save and Reset Settings allow you to execute the amendments or reset to the default setting of configuration.



### 3.21.1 Save

By clicking the “Save” button, you will save all the changes made in the management switch. You need to reboot the switch to ensure that the profile is updated correctly.

## System Messages

---

**The system configuration has been saved successfully.**

---

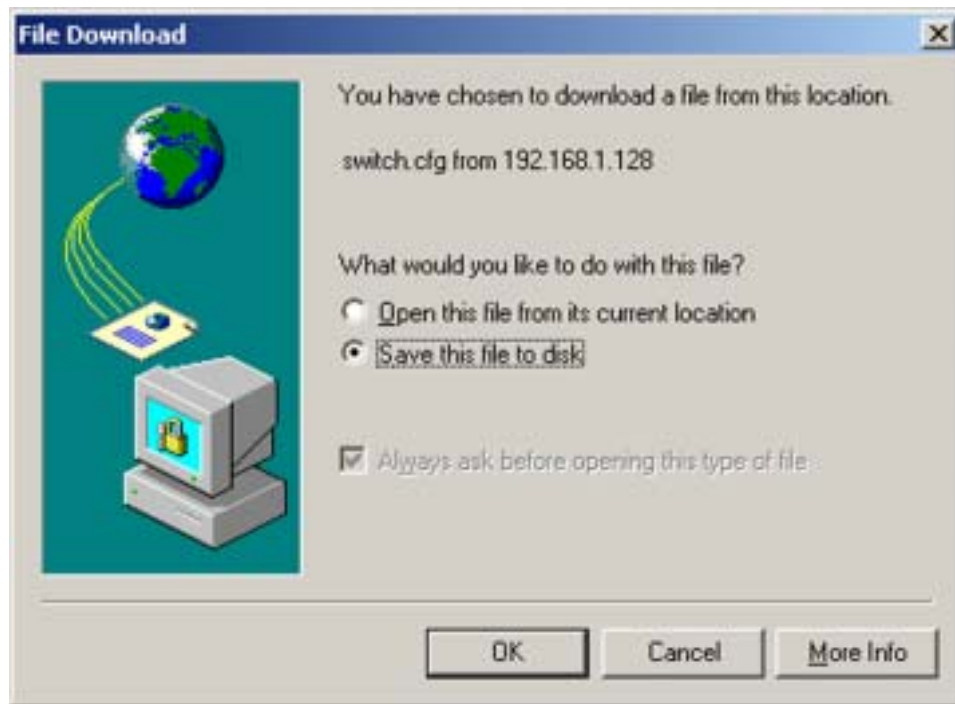
### 3.21.2 Backup

This option allows you to backup the switch’s configuration into a file.

**To create a backup configuration,**

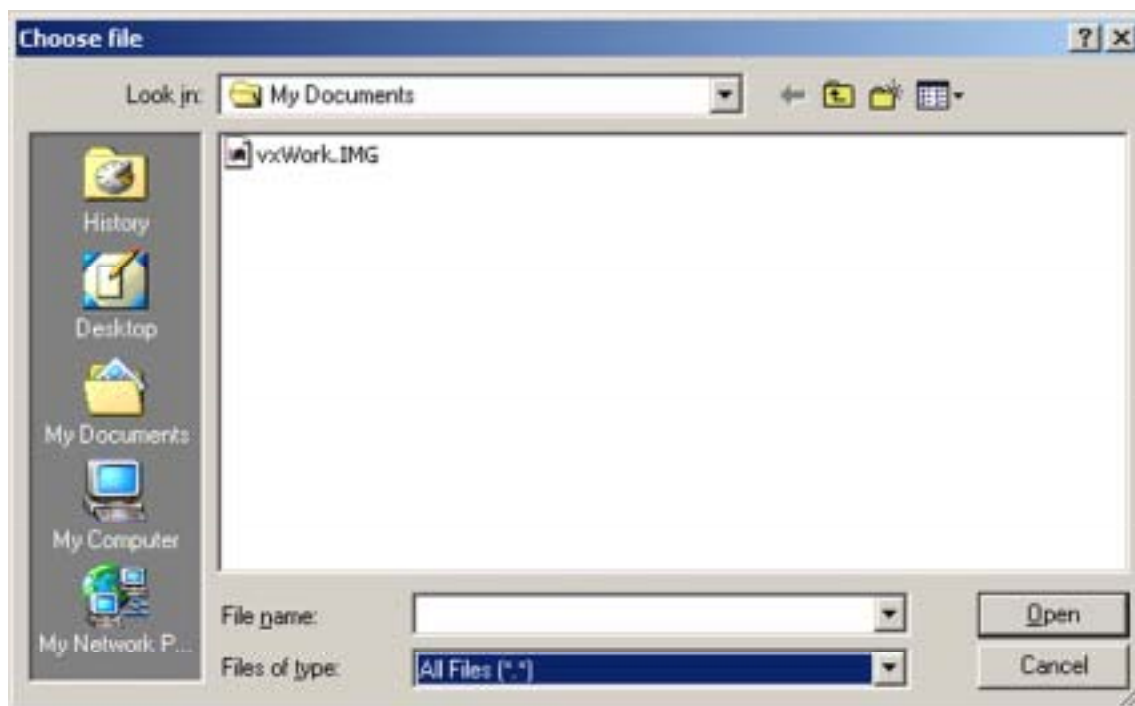
**Step 1:** Click on the “Backup” button and the system will prompt you to either open the file or save it to disk.

**Step 2:** Select the radio button to “Save the file to disk” and click “OK” button.

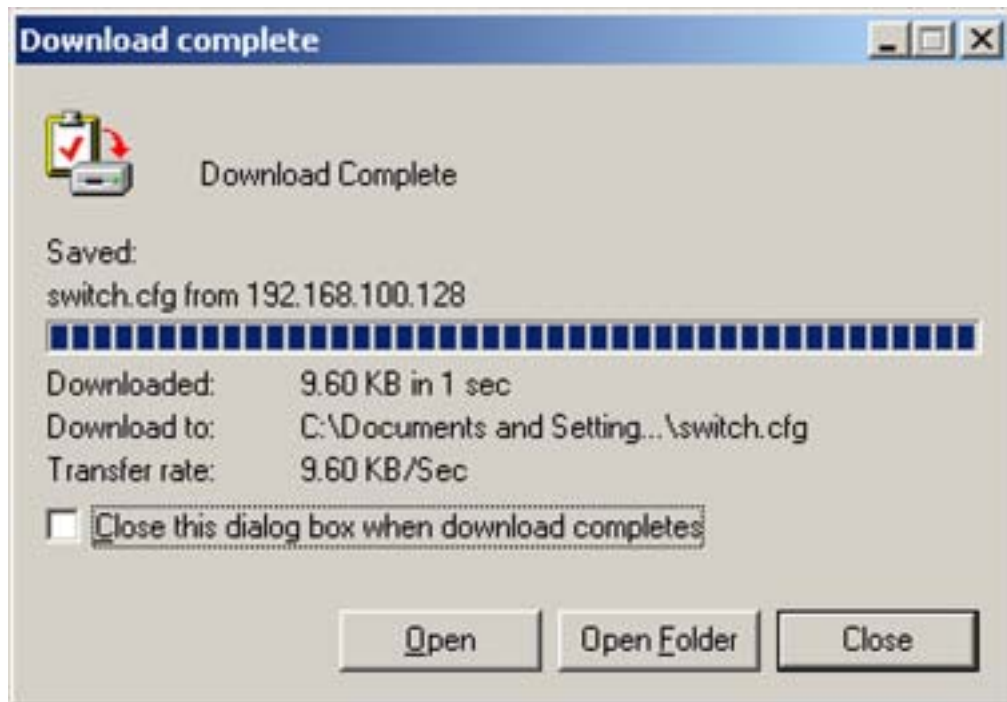


The system will then prompt you to save switch.cfg to a destination.

**Step 3:** Select a folder that you want to save the file and click "SAVE" button to proceed.



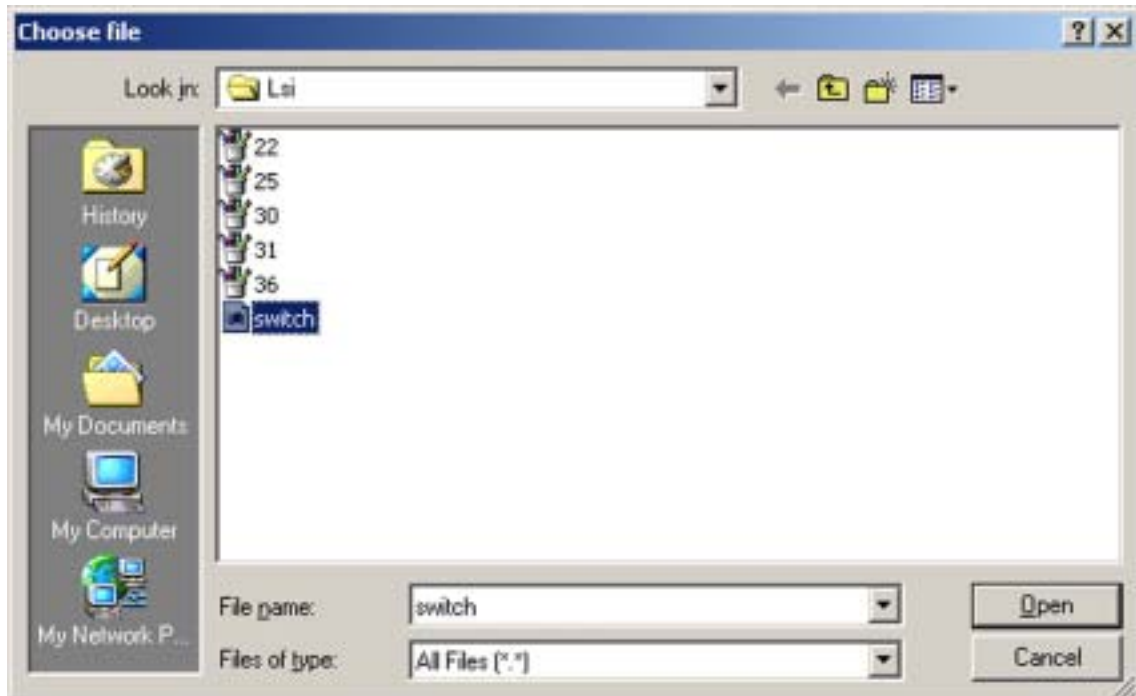
**Step 4:** After downloading process has completed, the following GUI will appear. Click "Close" button if you do not want to view the downloaded file.



### 3.21.3 Restore

This option allows you to restore the old configuration from your backup file.

**Step 1:** Click “Browse” button and select the file that you want the system to restore back the configuration.



**Step 2:** Click “Restore” button to start the process.

## Switch Settings

Save the Switch's current configuration

Save

Backup the Switch's configuration

Backup

Restore the Switch's configuration (path and file name)

C:\SGSW2402\switch.cfg Browse...

Restore

Erase the Switch's configuration and restore its factory default settings

Clear and Reset

The system will request you to reboot the switch.

**Step 3:** Click “Yes” button to restart the switch.

## Reboot Switch

Reboot the Switch?

Yes

**Step 4:** Wait for about 60 seconds and the system will automatically return to the Login Web page, prompting you to enter password again.

### 3.21.4 Clear and Reset

By clicking this option, you will restore the management switch to factory defaults. And you will have to re-enter all the configuration information to your network.

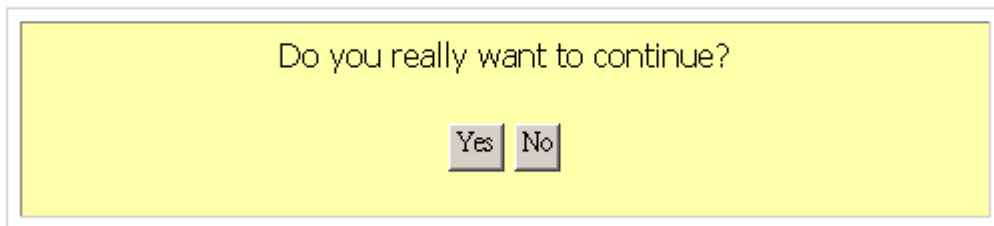
**To Clear or reset the setting,**

**Step 1:** Click on “Clear and Reset” button. The system will prompt you to choose whether you really want to reset the configuration data.

**Step 2:** Click “Yes” button to proceed and the system will automatically reset the IP address to factory default, which is <http://192.168.100.128>



## Reset Configuration Data



**Step 3:** Click "Logon" button if you want to make some more changes.

### 3.22 Message Windows

Display Switch system message.



Figure 3-23 The Message Window page

### 3.2.3 Reboot Switch

Rebooting the management switch is required after changes are made in the configuration or setting.

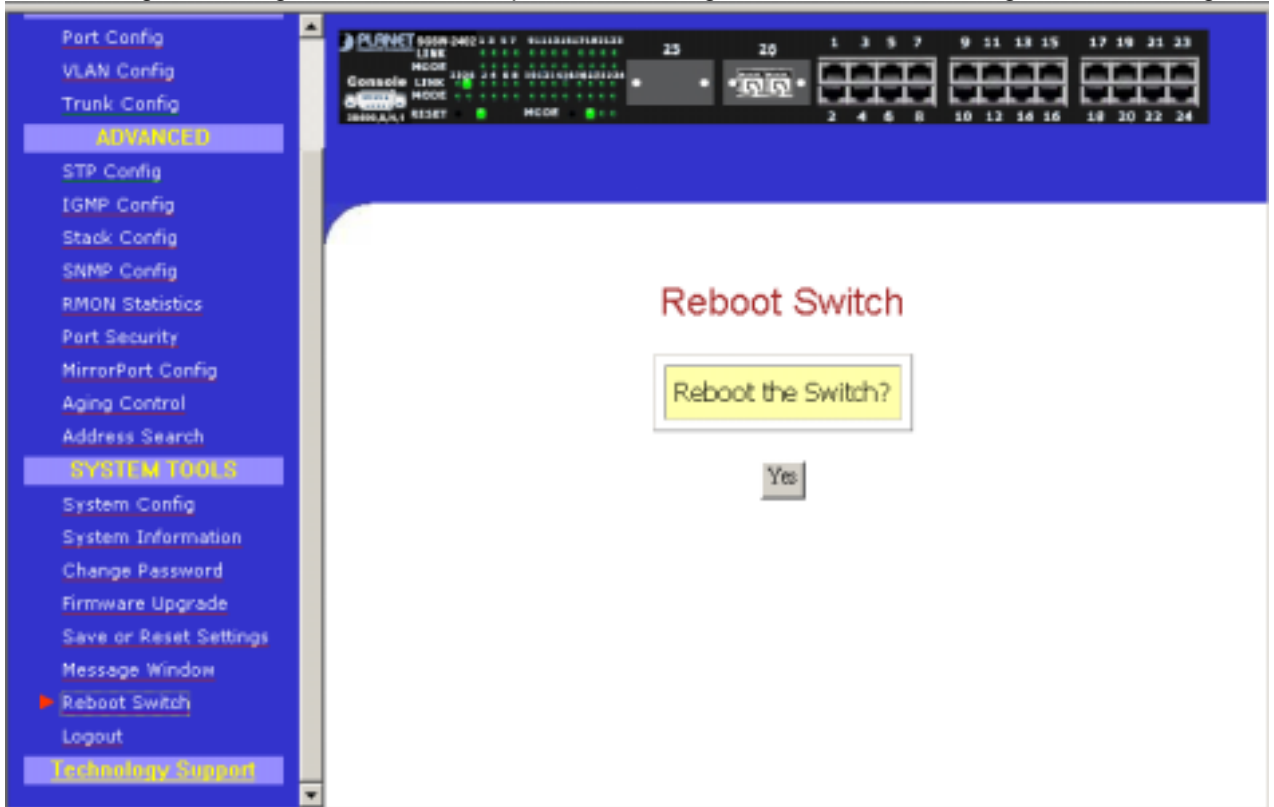


Figure 3-24 The Reboot Switch page

Click “Yes” to reboot the switch. The system will prompt you to logon again after about 60 seconds to see the effect.

### 3.2.4 Logout

With the web browser, logging out is as easy as ABC. By clicking “Logout” button, you will get a logout GUI as shown below. If you need to access to the Web Page again, you just need to click “Logon” button. **This is true only if you have not changed the default factory settings for the IP address of your switch.**

Alternatively, you can log in again into the web-based browser via <http://192.168.100.128> or the new IP address, which you have assigned to the switch.

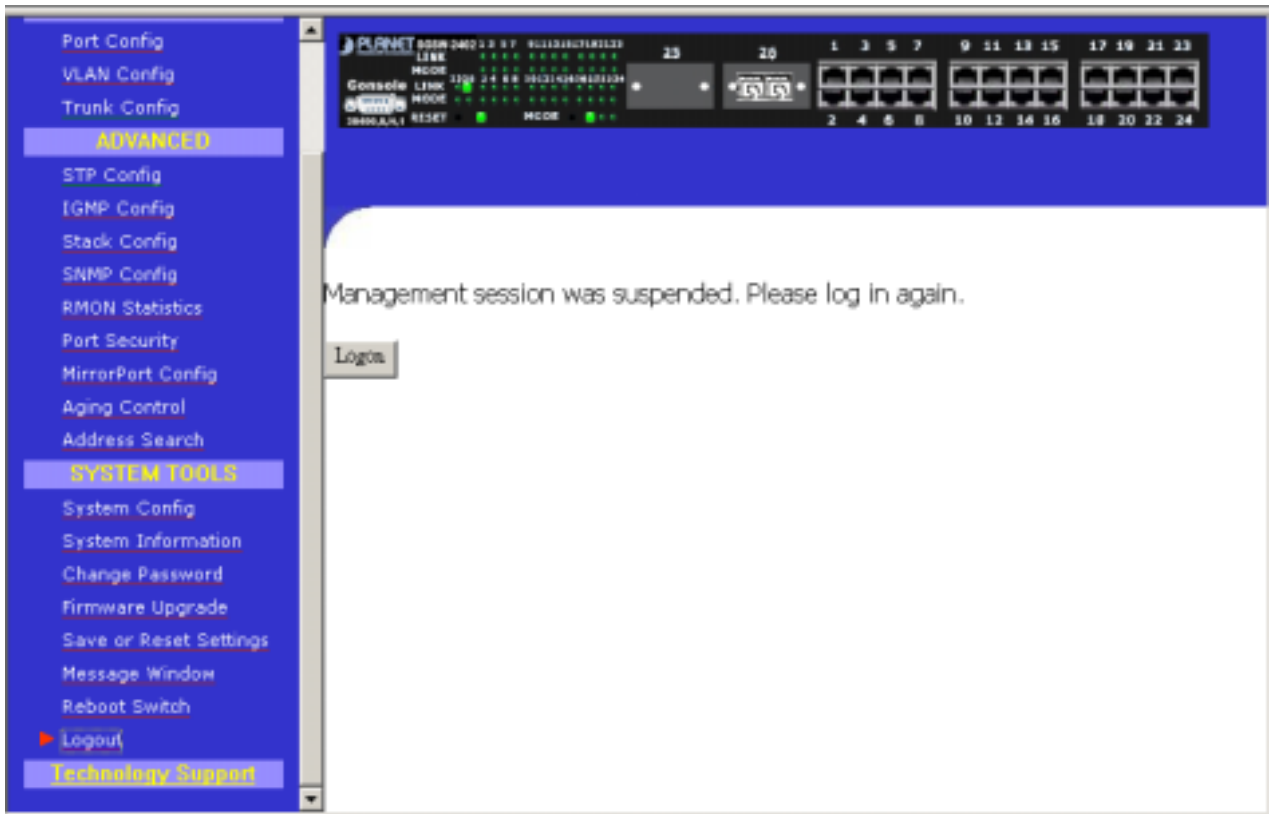


Figure 3-25 The Logout page



**NOTE**

If you changed a new IP Address for the management switch, the system will **NOT** automatically changed to the new IP address after you click on the "Logout" button.

## 4 CONSOLE INTERFACE

### 4.1 CONNECT TO PC

To configure the system through its console interface, connect a serial cable to a COM port on a PC or notebook computer and to serial (console) port of the device. The console port of the device is DCE already, so that you can connect the console port directly through PC without the need of Null Modem.

A terminal program is required to make the software connection to the device. Windows' Hyper Terminal program may be a good choice. It can be accessed from the Start menu. Click START, then Programs, Accessories and then Hyper Terminal.

MS-DOS based terminal program such as PC-PLUS, PROCOMM, can also make the connection with the device built-in software. The COM port should be configured as:

- ◆ **Baud** : 38400
- ◆ **Parity** : None
- ◆ **Data bits** : 8
- ◆ **Stop bits** : 1
- ◆ **Flow Control:** none

For example, if using hyperterminal, the configuration should be:



## 4.2 Logging on to the Switch

To log on to the Switch:

1. At the screen prompt:

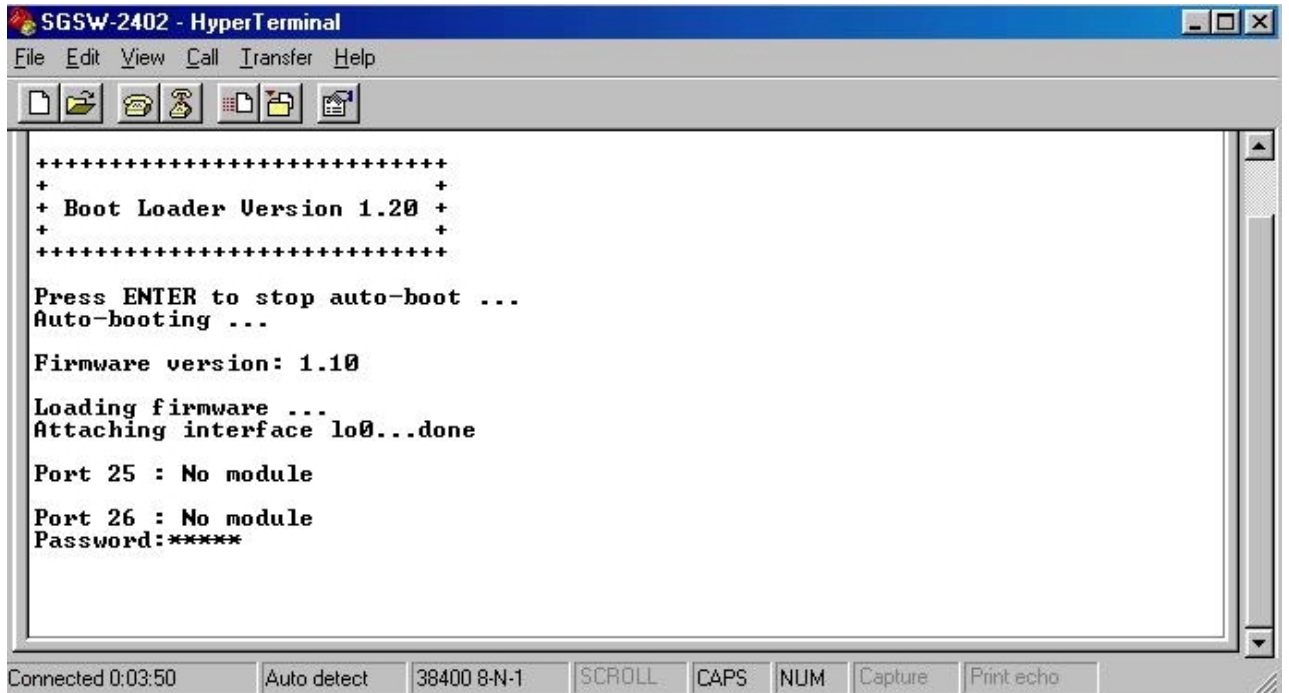


Figure 4-1 SGSW-2402 Console Login on Screen

Enter the console interface factory default console password (admin) or user-defined password if you changed the default password using the instructions in Section 4.2.9 . The Switch Management prompt in Figure 4-2 appears:

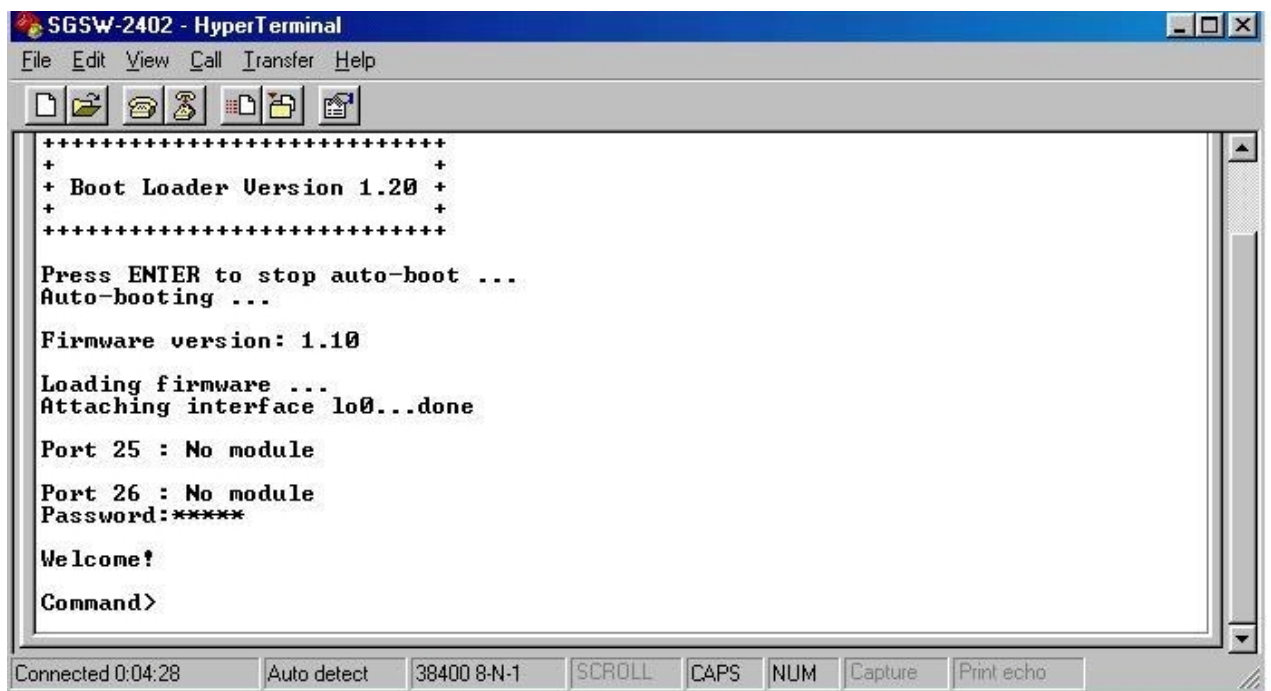


Figure 4-2 SGSW-2402 Console Main Screen

Please type “**Help**” on the command line, the main menu displays all the system command usage that are available as below:

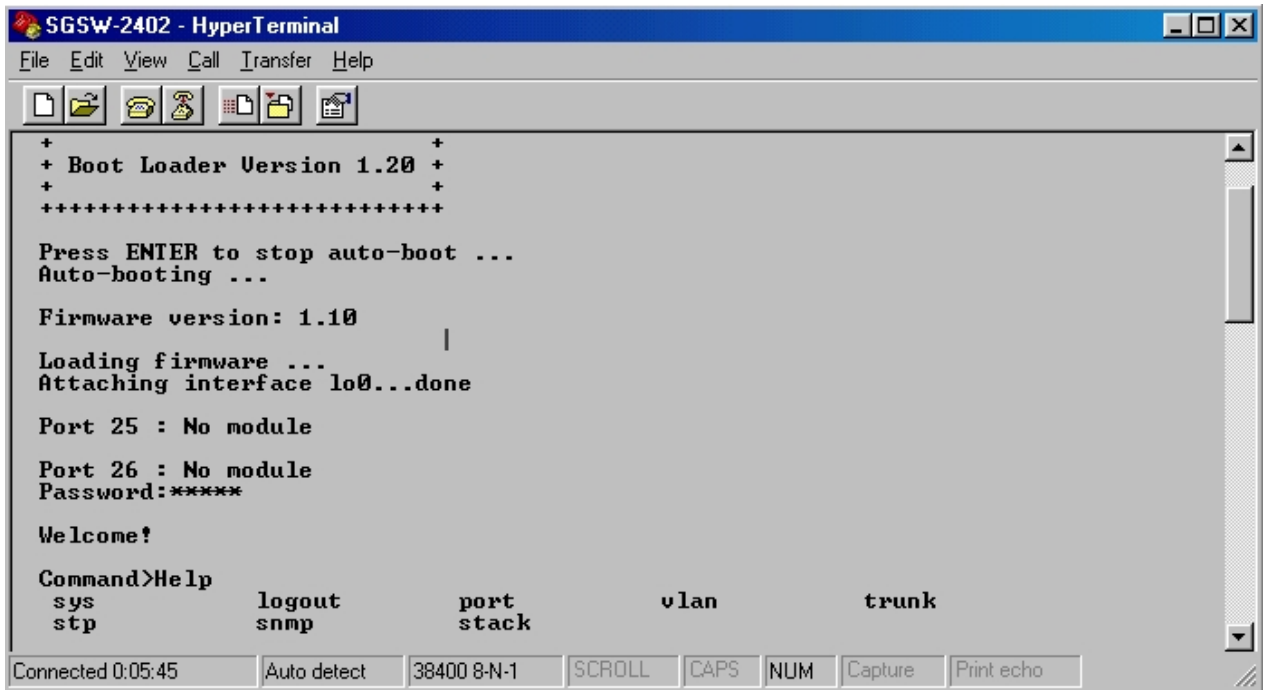


Figure 4-3 SGSW-2402 Console command Screen

## **SYS--SYSTEM MANAGEMENT COMMANDS**

- sys show info
- sys show ip
- sys show ethernet address
- sys set ip <IP Address> <Subnet Mask> <Default Gateway>
- sys set name "string"
- sys set contact "string"
- sys set location "string"
- sys set password
- sys set link\_info <on|off>
- sys reset system
- sys reset config
- sys save config

## **LOGOUT--EXIT MANAGEMENT COMMANDS**

- Logout

## **PORT--PORT MANAGEMENT COMMANDS**

- port show
- port set enable <port number> [-h|-f] [-10|-100|-1000] [-A]
- port set disable <port number>
- port set flw <port number> <on|off>
- port set bck <port number> <on|off>
- port set pri <port number> <-p priority>
- port set vid <port number> <-v vid>

## VLAN--VLAN MANAGEMENT COMMANDS

```
vlan show
vlan build <vid> <-u untags> <-t tags> <-p priority>
vlan delete <vid>
vlan set pri <vid> <-p priority>
```

## TRUNK--TRUNK MANAGEMENT COMMANDS

```
trunk show
trunk set <port1> [port2] [port3] [port4]
```

## STP--STP MANAGEMENT COMMANDS

```
stp [on|off]
```

## SNMP--SNMP MANAGEMENT COMMANDS

```
SNMP [ON|OFF]
```

## STACK--STACK MANAGEMENT COMMANDS

```
stack [on|off]
```

### 4.2.1. sys--System Management Commands

This menu contains system parameters to display and configure the switch to your network. Menu items are:

```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>sys
      ^ Incomplete Command
show      set      reset      save

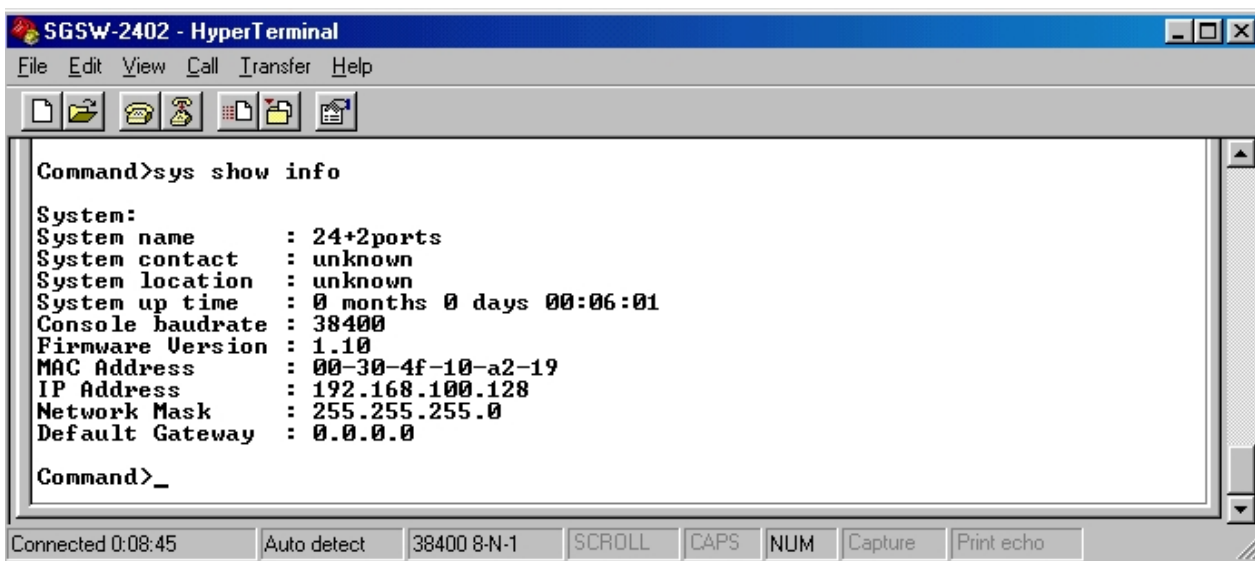
  sys show info
  sys show ip
  sys show ethernet address
  sys set ip <IP Address> <Subnet Mask> <Default Gateway>
  sys set name "string"
  sys set contact "string"
  sys set location "string"
  sys set password
  sys set link_info <on|off>
  sys reset system
  sys reset config
  sys save config

Command>_
Connected 0:06:36 Auto detect 38400 8-N-1 SCROLL CAPS NUM Capture Print echo
```

Figure 4-4 SGSW-2402 sys command Screen

## 4.2.2 sys show info

This command display the system information of SGSW-2402.

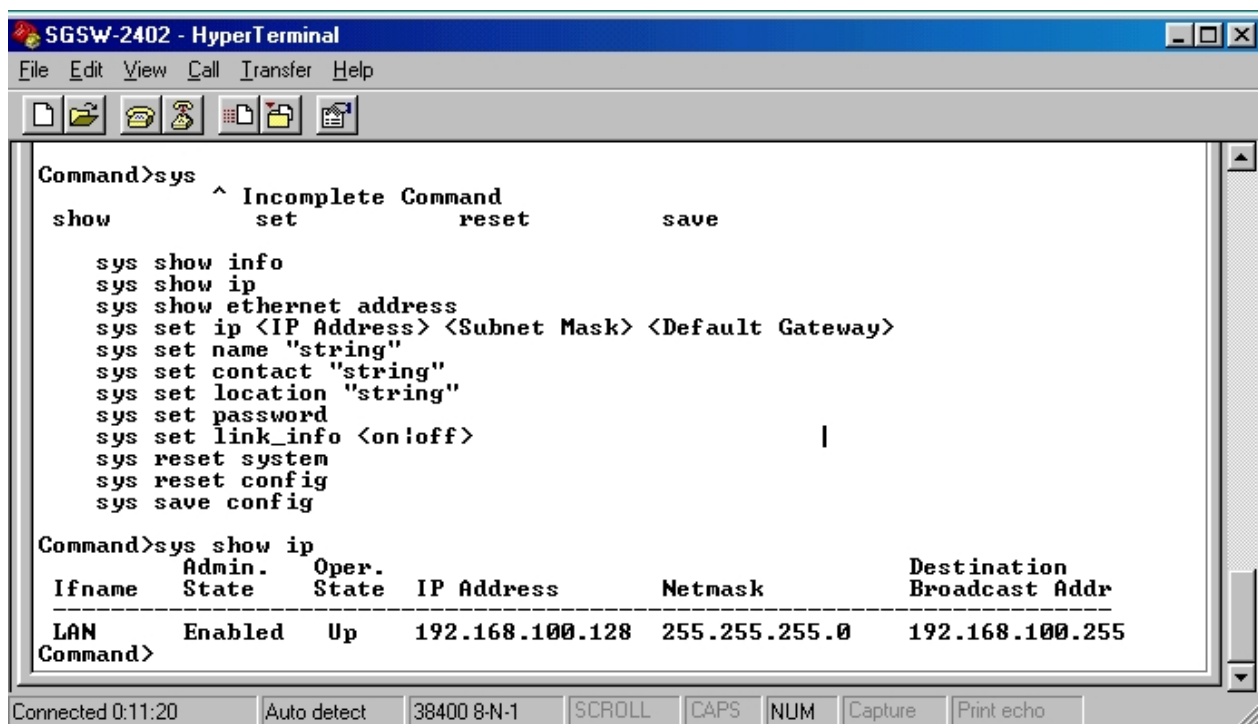


```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>sys show info
System:
System name      : 24+2ports
System contact   : unknown
System location  : unknown
System up time   : 0 months 0 days 00:06:01
Console baudrate : 38400
Firmware Version : 1.10
MAC Address      : 00-30-4f-10-a2-19
IP Address       : 192.168.100.128
Network Mask     : 255.255.255.0
Default Gateway  : 0.0.0.0
Command>_
Connected 0:08:45  Auto detect  38400 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Figure 4-5 SGSW-2402 system information Screen

## 4.2.3. sys show IP

This command display the network information of SGSW-2402.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>sys
^ Incomplete Command
show      set      reset      save

sys show info
sys show ip
sys show ethernet address
sys set ip <IP Address> <Subnet Mask> <Default Gateway>
sys set name "string"
sys set contact "string"
sys set location "string"
sys set password
sys set link_info <on|off>
sys reset system
sys reset config
sys save config

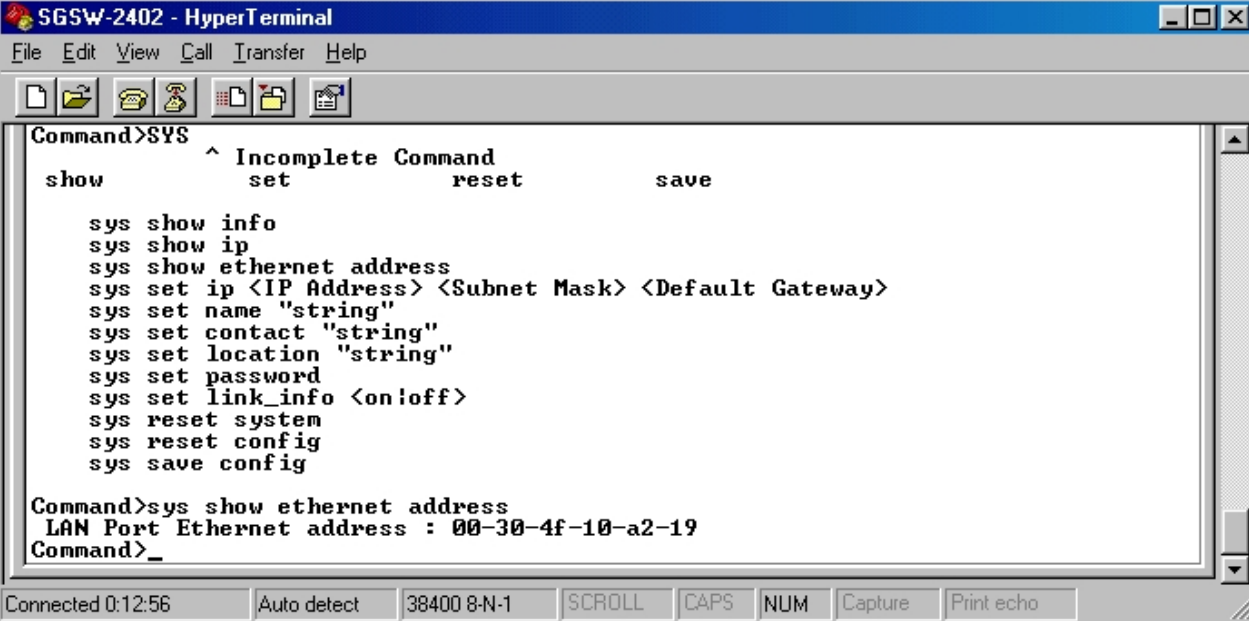
Command>sys show ip
Admin. Oper. Destination
Ifname State State IP Address Netmask Broadcast Addr
-----
LAN Enabled Up 192.168.100.128 255.255.255.0 192.168.100.255
Command>
Connected 0:11:20  Auto detect  38400 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Figure 4-6 SGSW-2402 network information Screen



#### 4.2.4. sys show Ethernet address

This command display the MAC address of SGSW-2402.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>SYS
      ^ Incomplete Command
show      set      reset      save

  sys show info
  sys show ip
  sys show ethernet address
  sys set ip <IP Address> <Subnet Mask> <Default Gateway>
  sys set name "string"
  sys set contact "string"
  sys set location "string"
  sys set password
  sys set link_info <on|off>
  sys reset system
  sys reset config
  sys save config

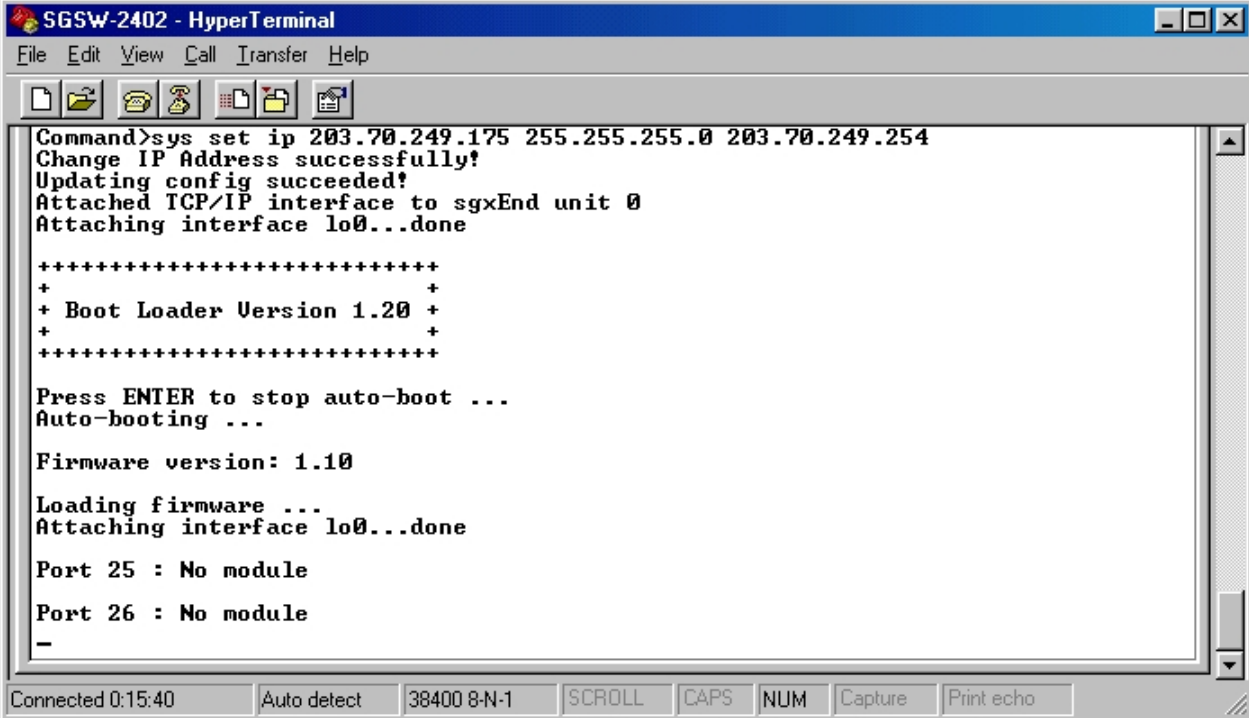
Command>sys show ethernet address
LAN Port Ethernet address : 00-30-4f-10-a2-19
Command>_

Connected 0:12:56  Auto detect  38400 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Figure 4-7 SGSW-2402 Mac address information Screen

#### 4.2.5. sys set ip <IP Address> <Subnet Mask> <Default Gateway>

This command allow to set the IP address, Subnet Mask, Gateway of SGSW-2402.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>sys set ip 203.70.249.175 255.255.255.0 203.70.249.254
Change IP Address successfully!
Updating config succeeded!
Attached TCP/IP interface to sgxEnd unit 0
Attaching interface lo0...done

+++++
+                               +
+   Boot Loader Version 1.20   +
+                               +
+++++

Press ENTER to stop auto-boot ...
Auto-booting ...

Firmware version: 1.10

Loading firmware ...
Attaching interface lo0...done

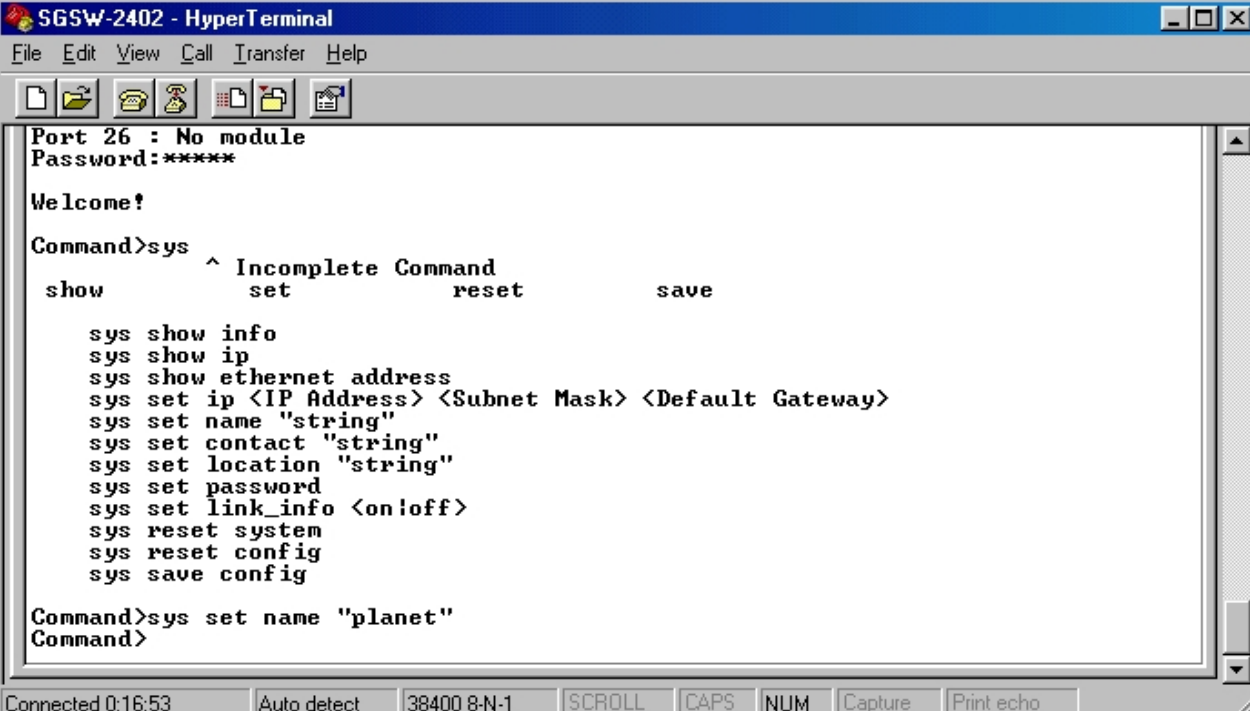
Port 25 : No module
Port 26 : No module
-

Connected 0:15:40  Auto detect  38400 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Figure 4-8 SGSW-2402 network setting Screen

#### 4.2.6. sys set name "string"

This commands allow to set the system name of SGSW-2402.



The screenshot shows a HyperTerminal window titled "SGSW-2402 - HyperTerminal". The window contains a menu bar (File, Edit, View, Call, Transfer, Help) and a toolbar with icons for file operations. The main text area displays the following content:

```
Port 26 : No module
Password:*****

Welcome!

Command>sys
      ^ Incomplete Command
show      set      reset      save

  sys show info
  sys show ip
  sys show ethernet address
  sys set ip <IP Address> <Subnet Mask> <Default Gateway>
  sys set name "string"
  sys set contact "string"
  sys set location "string"
  sys set password
  sys set link_info <on|off>
  sys reset system
  sys reset config
  sys save config

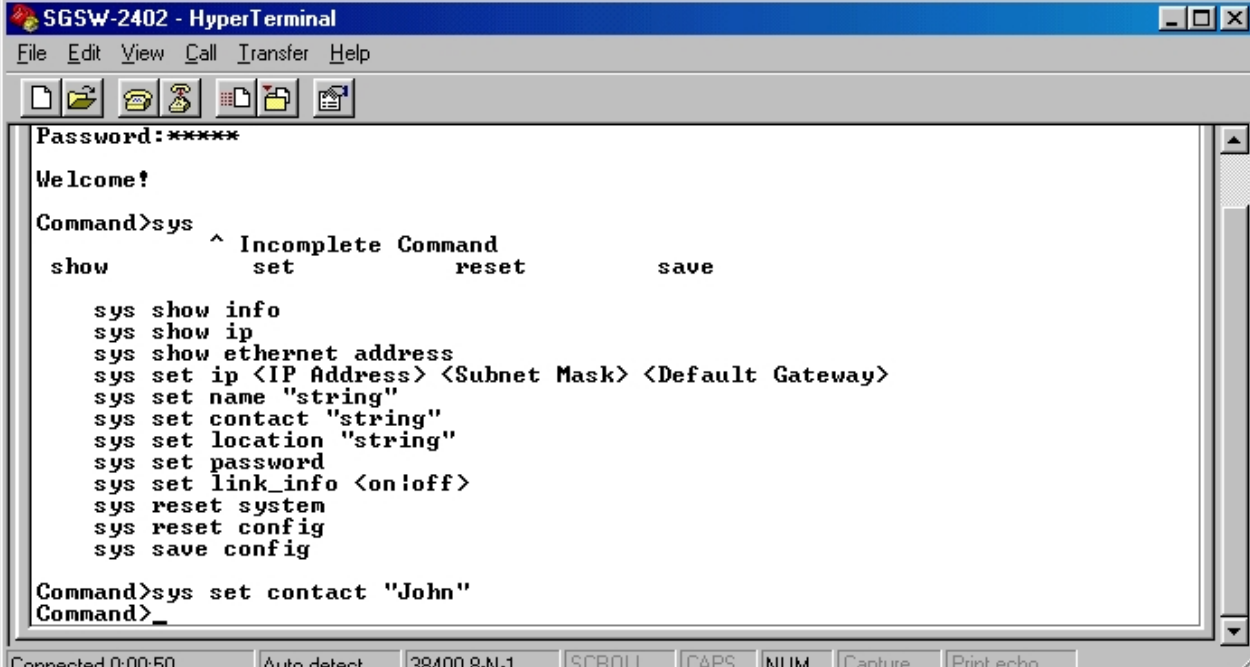
Command>sys set name "planet"
Command>
```

At the bottom of the window, there is a status bar with the following information: Connected 0:16:53, Auto detect, 38400 8-N-1, SCROLL, CAPS, NUM, Capture, Print echo.

Figure 4-9 SGSW-2402 system name setting Screen

#### 4.2.7. sys set contact "string"

This command allow to set system administrator name of SGSW-2402.



The screenshot shows a HyperTerminal window titled "SGSW-2402 - HyperTerminal". The window contains a menu bar (File, Edit, View, Call, Transfer, Help) and a toolbar with icons for file operations. The main text area displays the following content:

```
Password:*****

Welcome!

Command>sys
      ^ Incomplete Command
show      set      reset      save

  sys show info
  sys show ip
  sys show ethernet address
  sys set ip <IP Address> <Subnet Mask> <Default Gateway>
  sys set name "string"
  sys set contact "string"
  sys set location "string"
  sys set password
  sys set link_info <on|off>
  sys reset system
  sys reset config
  sys save config

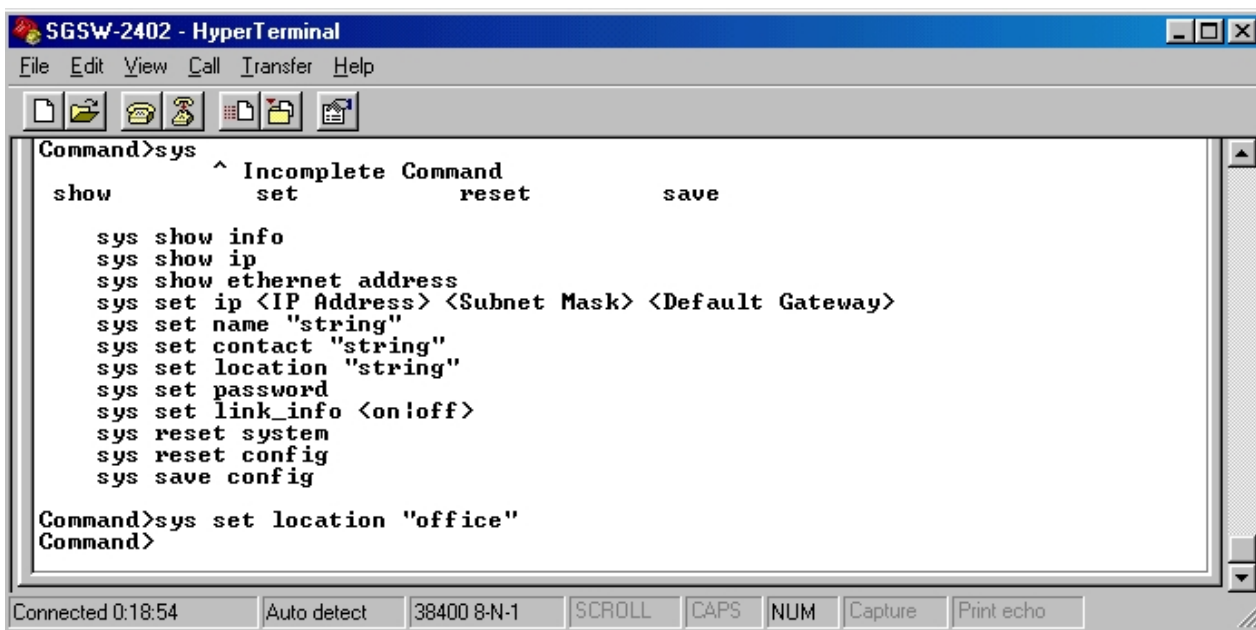
Command>sys set contact "John"
Command>
```

At the bottom of the window, there is a status bar with the following information: Connected 0:00:50, Auto detect, 38400 8-N-1, SCROLL, CAPS, NUM, Capture, Print echo.

Figure 4-10 SGSW-2402 system administrator name setting Screen

#### 4.2.8. sys set location "string"

This command allow to set the location of SGSW-2402.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>sys ^ Incomplete Command
show      set          reset       save


sys show info
sys show ip
sys show ethernet address
sys set ip <IP Address> <Subnet Mask> <Default Gateway>
sys set name "string"
sys set contact "string"
sys set location "string"
sys set password
sys set link_info <on!off>
sys reset system
sys reset config
sys save config

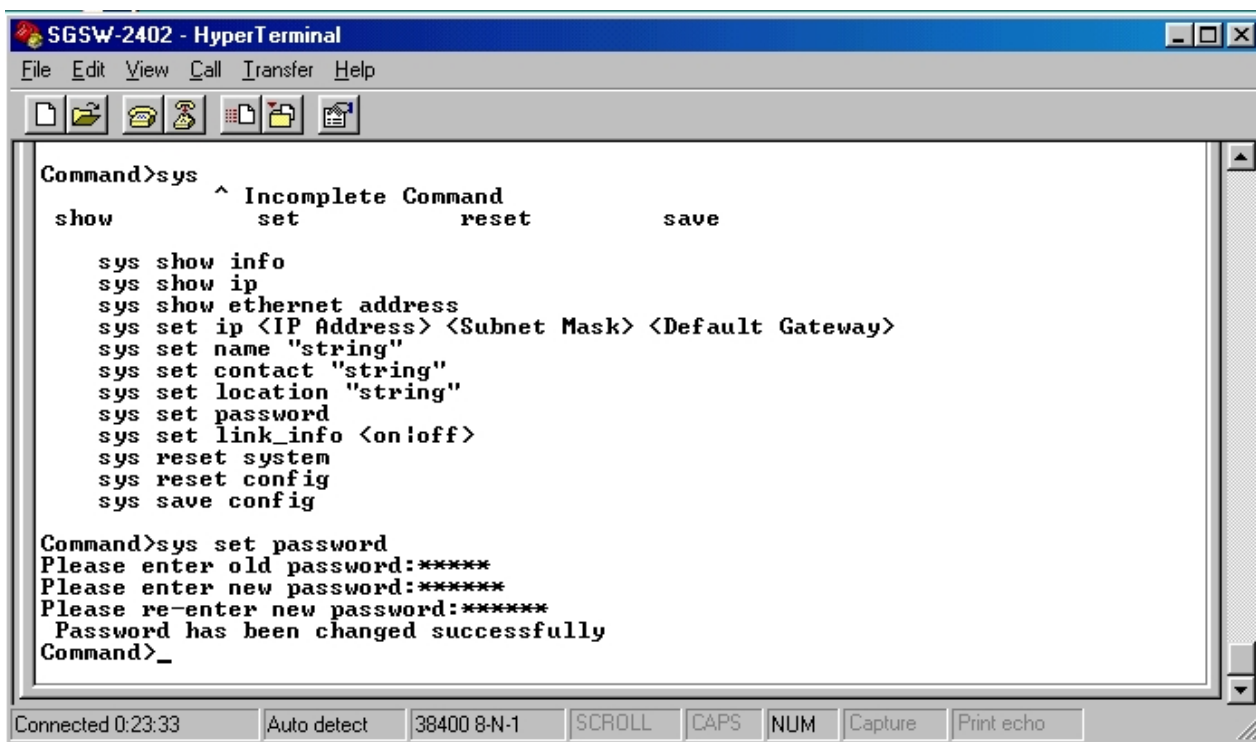
Command>sys set location "office"
Command>
```

Figure 4-11 SGSW-2402 system location setting Screen

#### 4.2.9. sys set password

This command allow to set the password of SGSW-2402.

 **NOTE** The new password should be an alphanumeric string of size 6 to 15, starting with a letter



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>sys ^ Incomplete Command
show      set          reset       save

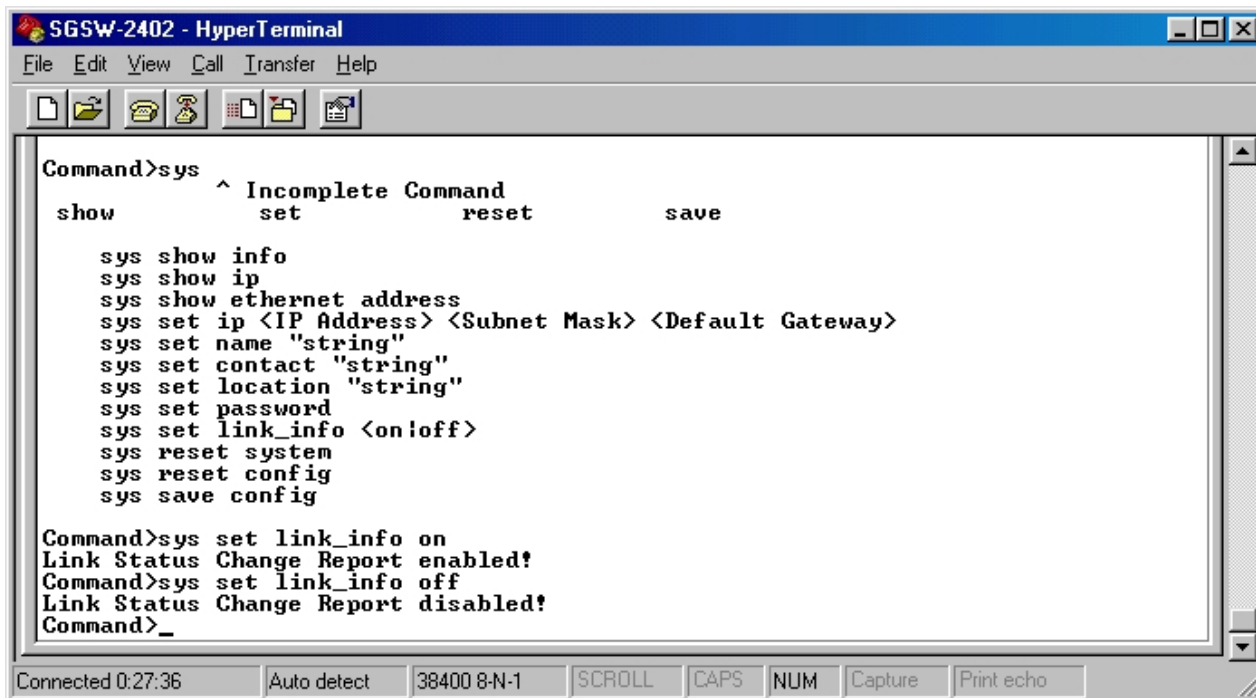
sys show info
sys show ip
sys show ethernet address
sys set ip <IP Address> <Subnet Mask> <Default Gateway>
sys set name "string"
sys set contact "string"
sys set location "string"
sys set password
sys set link_info <on!off>
sys reset system
sys reset config
sys save config

Command>sys set password
Please enter old password:*****
Please enter new password:*****
Please re-enter new password:*****
Password has been changed successfully
Command>_
```

Figure 4-12 SGSW-2402 password setting Screen

#### 4.2.10. sys set link\_info <on|off>

This command is used to report the link status of the ports. Once it is enabled, it will prompt the port status on the console. Or if you disable it, it will not prompt the port status any more.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>sys
show      ^ Incomplete Command
          set      reset      save

  sys show info
  sys show ip
  sys show ethernet address
  sys set ip <IP Address> <Subnet Mask> <Default Gateway>
  sys set name "string"
  sys set contact "string"
  sys set location "string"
  sys set password
  sys set link_info <on|off>
  sys reset system
  sys reset config
  sys save config

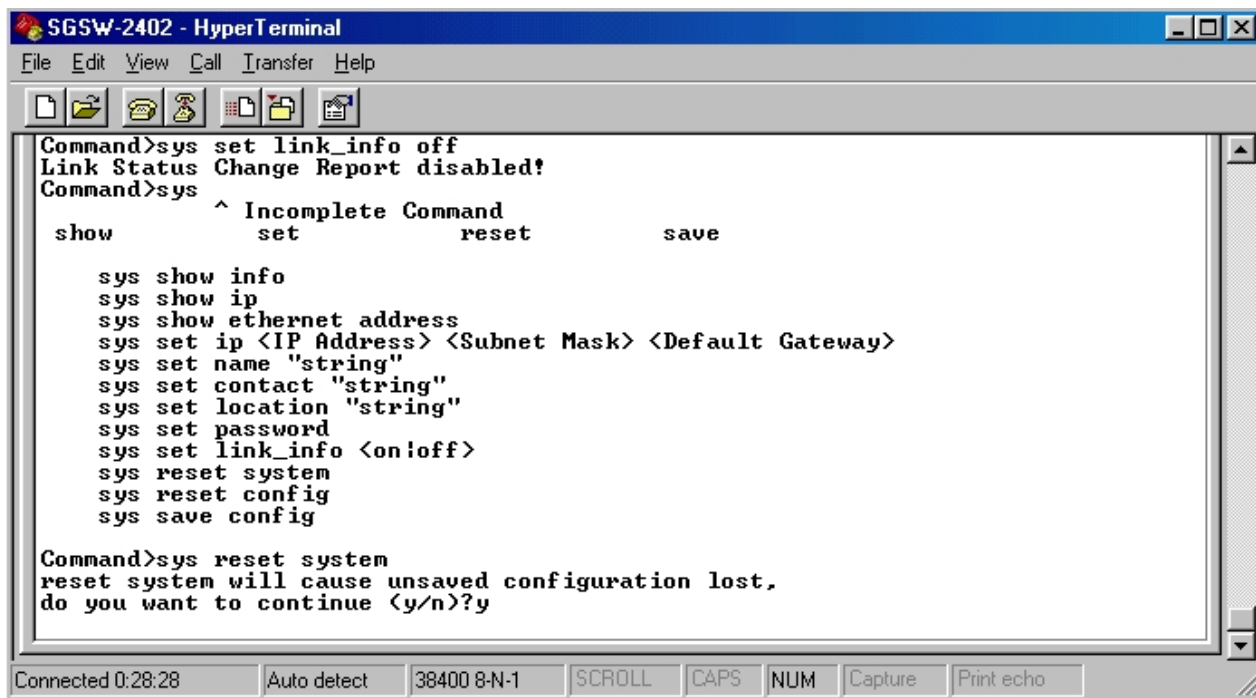
Command>sys set link_info on
Link Status Change Report enabled!
Command>sys set link_info off
Link Status Change Report disabled!
Command>_

Connected 0:27:36  Auto detect  38400 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Figure 4-13 SGSW-2402 system link report setting Screen

#### 4.2.11. sys reset system

This command will reboot the SGSW-2402.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>sys set link_info off
Link Status Change Report disabled!
Command>sys
show      ^ Incomplete Command
          set      reset      save

  sys show info
  sys show ip
  sys show ethernet address
  sys set ip <IP Address> <Subnet Mask> <Default Gateway>
  sys set name "string"
  sys set contact "string"
  sys set location "string"
  sys set password
  sys set link_info <on|off>
  sys reset system
  sys reset config
  sys save config

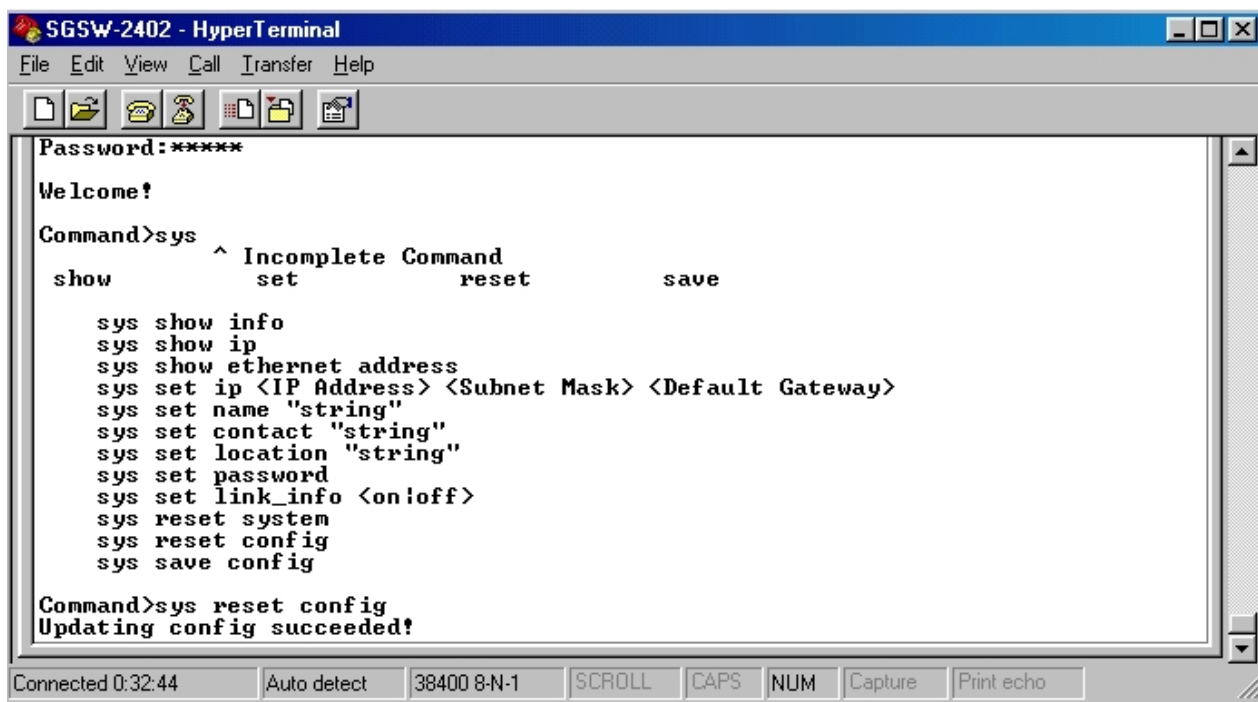
Command>sys reset system
reset system will cause unsaved configuration lost.
do you want to continue (y/n)?y

Connected 0:28:28  Auto detect  38400 8-N-1  SCROLL  CAPS  NUM  Capture  Print echo
```

Figure 4-14 SGSW-2402 reset system Screen

#### 4.2.12. sys reset config

This command will reboot and reset to the default mode of SGSW-2402.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
Password:*****
Welcome!
Command>sys
show      ^ Incomplete Command
          set          reset          save

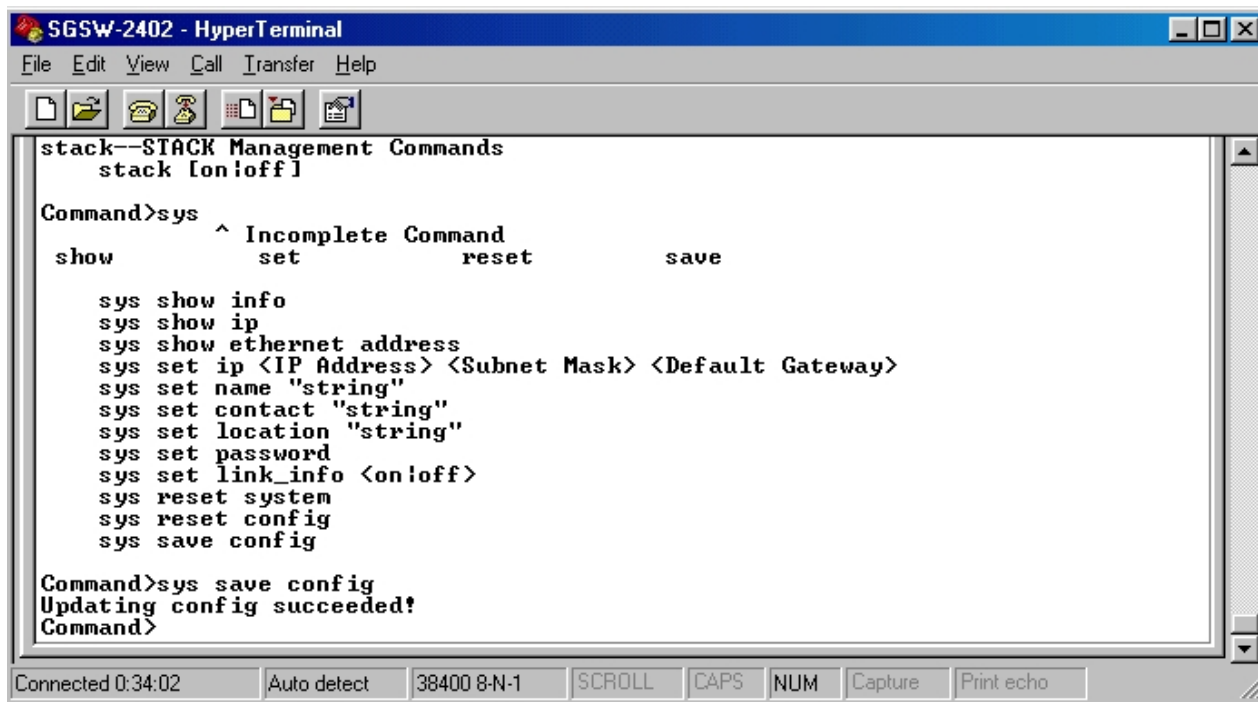
  sys show info
  sys show ip
  sys show ethernet address
  sys set ip <IP Address> <Subnet Mask> <Default Gateway>
  sys set name "string"
  sys set contact "string"
  sys set location "string"
  sys set password
  sys set link_info <on!off>
  sys reset system
  sys reset config
  sys save config

Command>sys reset config
Updating config succeeded!
```

Figure 4-15 SGSW-2402 reset config Screen

#### 4.2.13. sys save config

This command will save the current configure of SGSW-2402.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
stack--STACK Management Commands
stack [on!off]
Command>sys
show      ^ Incomplete Command
          set          reset          save

  sys show info
  sys show ip
  sys show ethernet address
  sys set ip <IP Address> <Subnet Mask> <Default Gateway>
  sys set name "string"
  sys set contact "string"
  sys set location "string"
  sys set password
  sys set link_info <on!off>
  sys reset system
  sys reset config
  sys save config

Command>sys save config
Updating config succeeded!
Command>
```

Figure 4-16 SGSW-2402 save config Screen

#### 4.2.14. logout

This command will logout the SGSW-2402.

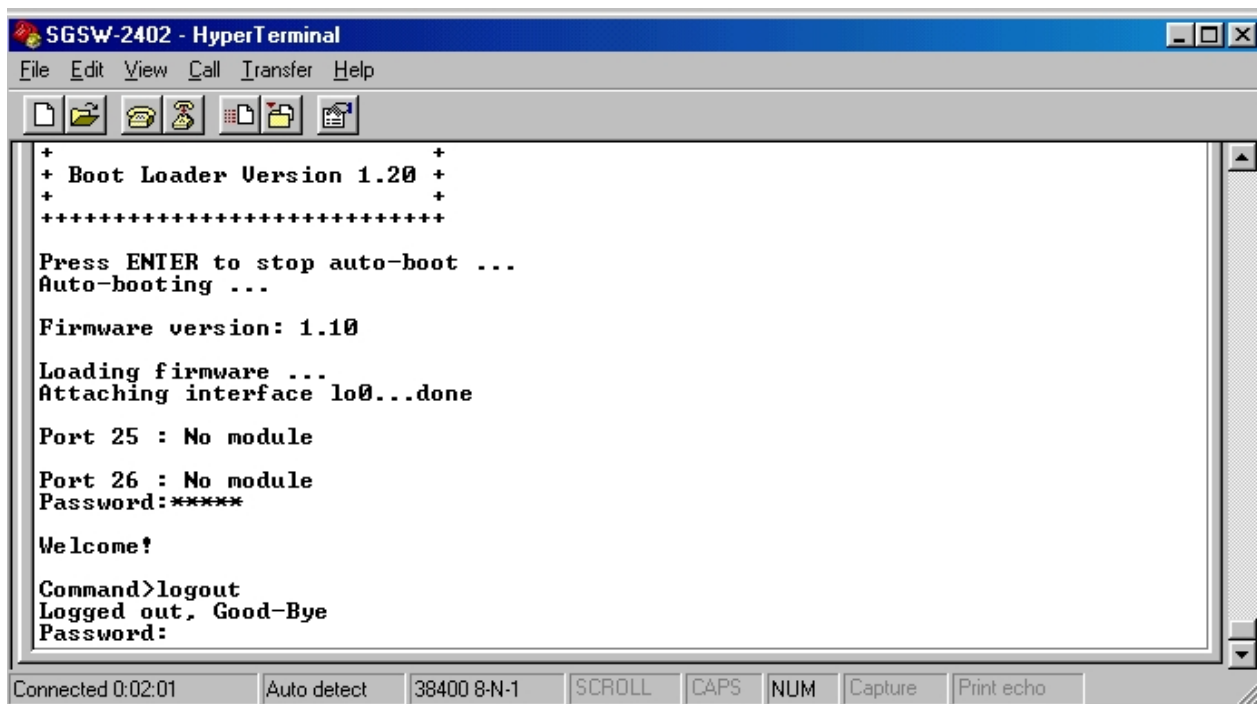


Figure 4-17 SGSW-2402 logout Screen

#### 4.2.15. port--Port Management Commands

This menu contains system parameters to display and configure the port of the switch Menu items are:

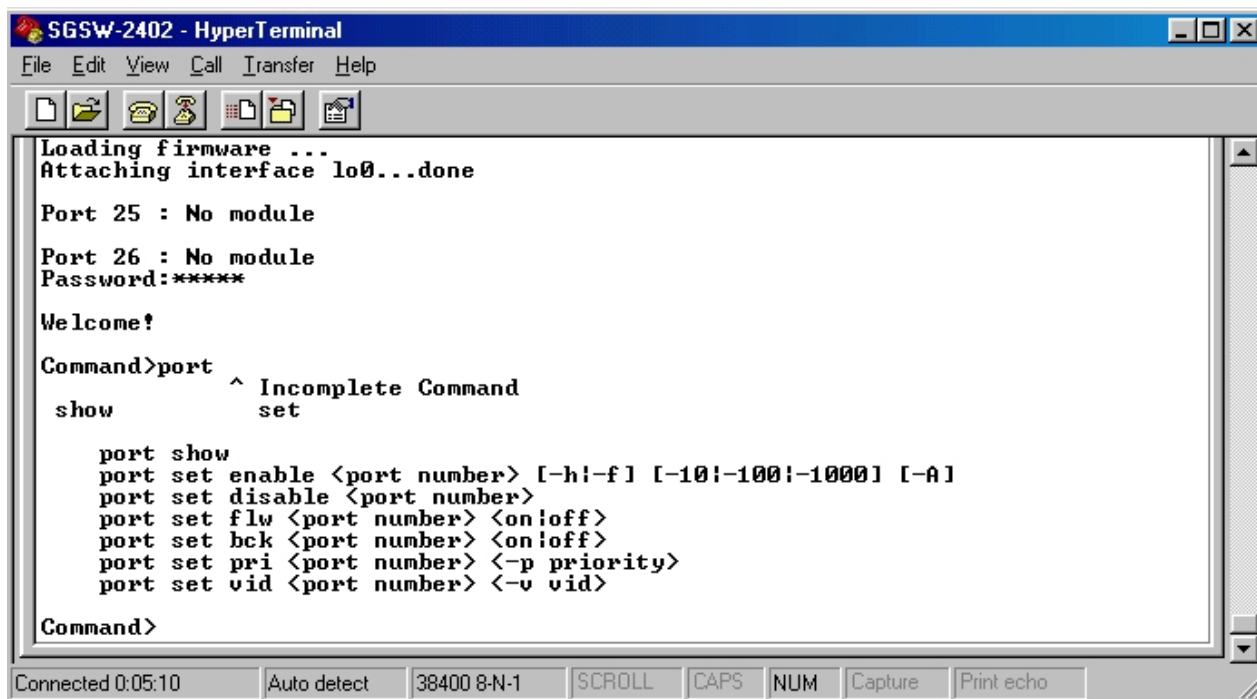


Figure 4-18 SGSW-2402 port command Screen

#### 4.2.16. port show

This command display port status of each port.

Port	Link	Duplex	Speed	Auto	Flow Cntr	BackP	Enable	Interface
1	Down			On	On	Off	On	10/100BASE-TX
2	Down			On	On	Off	On	10/100BASE-TX
3	Down			On	On	Off	On	10/100BASE-TX
4	Down			On	On	Off	On	10/100BASE-TX
5	Down			On	On	Off	On	10/100BASE-TX
6	Down			On	On	Off	On	10/100BASE-TX
7	Down			On	On	Off	On	10/100BASE-TX
8	Down			On	On	Off	On	10/100BASE-TX
9	Down			On	On	Off	On	10/100BASE-TX
10	Down			On	On	Off	On	10/100BASE-TX
11	Down			On	On	Off	On	10/100BASE-TX
12	Down			On	On	Off	On	10/100BASE-TX
13	Down			On	On	Off	On	10/100BASE-TX
14	Down			On	On	Off	On	10/100BASE-TX
15	Down			On	On	Off	On	10/100BASE-TX
16	Down			On	On	Off	On	10/100BASE-TX
17	Down			On	On	Off	On	10/100BASE-TX
18	Down			On	On	Off	On	10/100BASE-TX
19	Down			On	On	Off	On	10/100BASE-TX
20	Down			On	On	Off	On	10/100BASE-TX
21	Down			On	On	Off	On	10/100BASE-TX
22	Down			On	On	Off	On	10/100BASE-TX
23	Down			On	On	Off	On	10/100BASE-TX
24	Down			On	On	Off	On	10/100BASE-TX
25								No Module
26								No Module

Figure 4-19 SGSW-2402 port statistics Screen

#### 4.2.17. port set enable <port number> [-h|-f] [-10|-100|-1000] [-A]

This command allow to set the speed duplex mode of each port

```

port set enable <port number> [-h|-f] [-10|-100|-1000] [-A]

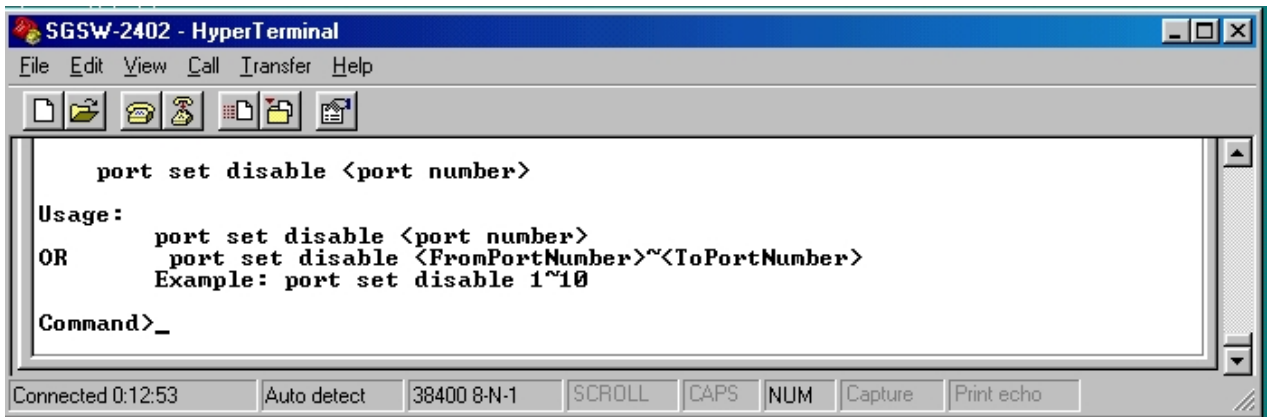
Usage:
port set enable <port number> [-h|-f] [-10|-100|-1000] [-A]
OR
port set enable <FromPortNumber>~<ToPortNumber> [-h|-f] [-10|-100|-1000] [-A]
-h:half duplex
-f:full duplex
-A:Enable AutoNegotiation
Example: port set enable 1~24 -f -100 OR port set enable 1~24 -A

Command>_
  
```

Figure 4-20 SGSW-2402 port set enable Screen

#### 4.2.18. port set disable <port number>

This command allow to disable each port



The screenshot shows a HyperTerminal window titled "SGSW-2402 - HyperTerminal". The window contains the following text:

```
port set disable <port number>

Usage:
port set disable <port number>
OR
port set disable <FromPortNumber>~<ToPortNumber>
Example: port set disable 1~10

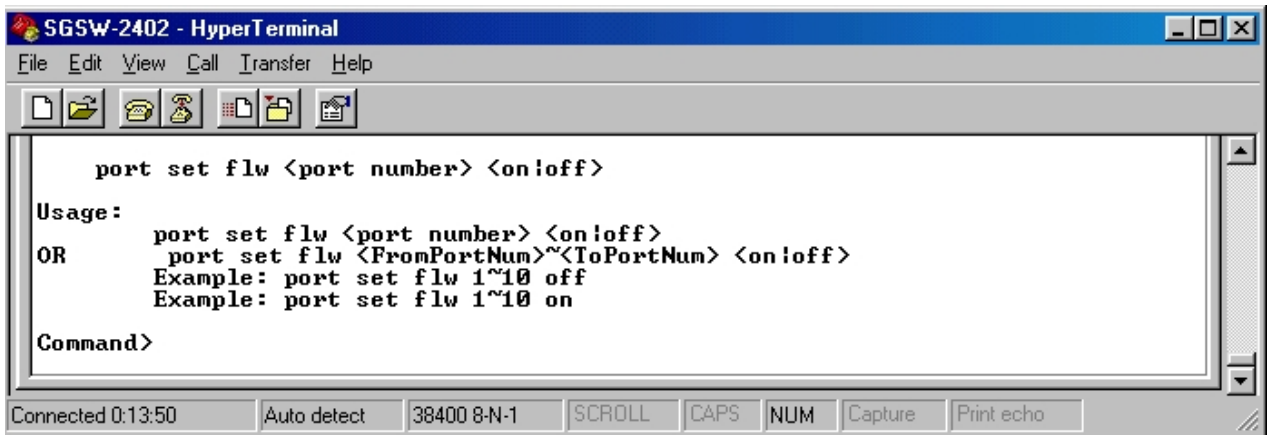
Command>_
```

At the bottom of the window, there is a status bar with the following information: Connected 0:12:53, Auto detect, 38400 8-N-1, SCROLL, CAPS, NUM, Capture, and Print echo.

Figure 4-21 SGSW-2402 port disable Screen

#### 4.2.19. port set flw <port number> <on|off>

This command allow to disable or enable flow control on each port



The screenshot shows a HyperTerminal window titled "SGSW-2402 - HyperTerminal". The window contains the following text:

```
port set flw <port number> <on|off>

Usage:
port set flw <port number> <on|off>
OR
port set flw <FromPortNum>~<ToPortNum> <on|off>
Example: port set flw 1~10 off
Example: port set flw 1~10 on

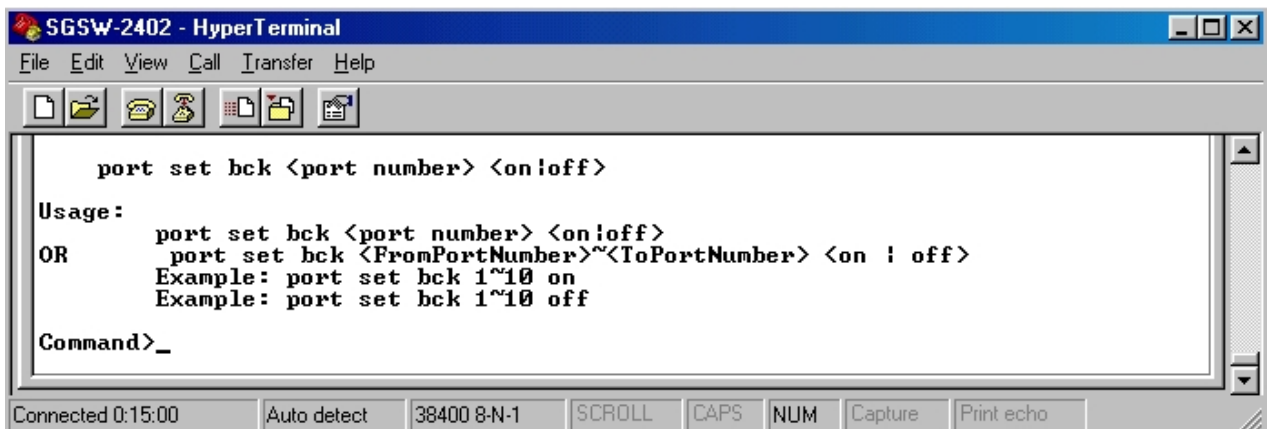
Command>
```

At the bottom of the window, there is a status bar with the following information: Connected 0:13:50, Auto detect, 38400 8-N-1, SCROLL, CAPS, NUM, Capture, and Print echo.

Figure 4-22 SGSW-2402 flow control disable /enable Screen

#### 4.2.20. port set bck <port number> <on|off>

This command allow to disable / enable Back Pressure on each port



The screenshot shows a HyperTerminal window titled "SGSW-2402 - HyperTerminal". The window contains the following text:

```
port set bck <port number> <on|off>

Usage:
port set bck <port number> <on|off>
OR
port set bck <FromPortNumber>~<ToPortNumber> <on | off>
Example: port set bck 1~10 on
Example: port set bck 1~10 off

Command>_
```

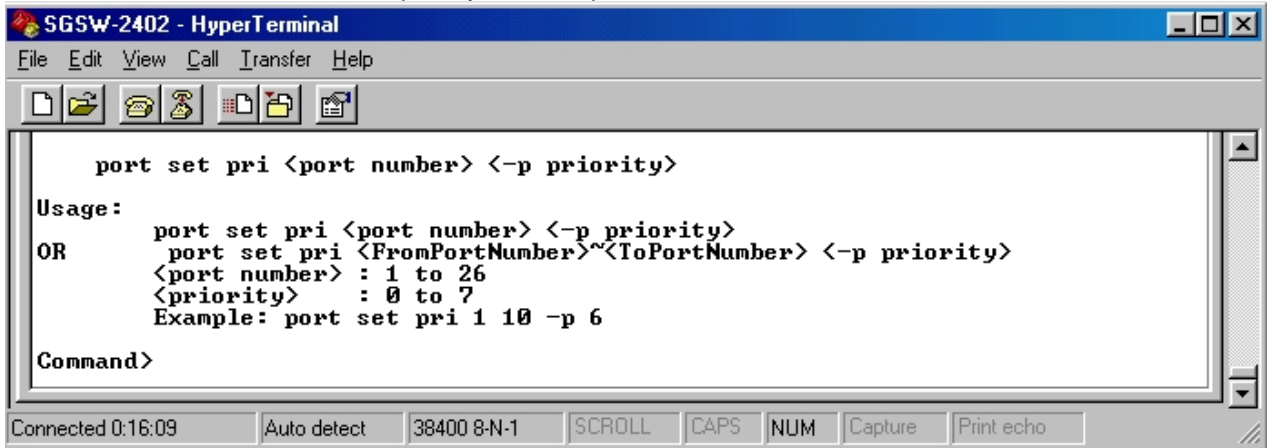
At the bottom of the window, there is a status bar with the following information: Connected 0:15:00, Auto detect, 38400 8-N-1, SCROLL, CAPS, NUM, Capture, and Print echo.

Figure 4-23 SGSW-2402 Back Pressure disable /enable Screen



#### 4.2.21. port set pri <port number> <-p priority>

This command allow to set the priority on each port



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help

port set pri <port number> <-p priority>

Usage:
port set pri <port number> <-p priority>
OR
port set pri <FromPortNumber>~<ToPortNumber> <-p priority>
<port number> : 1 to 26
<priority>    : 0 to 7
Example: port set pri 1 10 -p 6

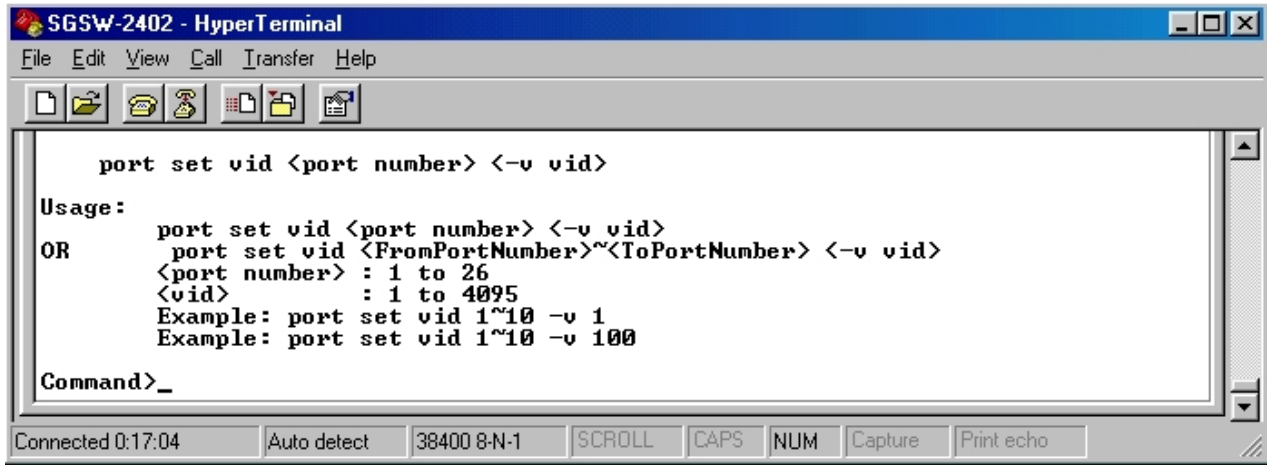
Command>
```

Connected 0:16:09 Auto detect 38400 8-N-1 SCROLL CAPS NUM Capture Print echo

Figure 4-24 SGSW-2402 port priority Screen

#### 4.2.22. port set vid <port number> <-v vid>

This command allow to set the VLAN group and assign VLAN ID.



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help

port set vid <port number> <-v vid>

Usage:
port set vid <port number> <-v vid>
OR
port set vid <FromPortNumber>~<ToPortNumber> <-v vid>
<port number> : 1 to 26
<vid>         : 1 to 4095
Example: port set vid 1~10 -v 1
Example: port set vid 1~10 -v 100

Command>_
```

Connected 0:17:04 Auto detect 38400 8-N-1 SCROLL CAPS NUM Capture Print echo

Figure 4-25 SGSW-2402 port VLAN ID Screen

### 4.2.23. vlan--VLAN Management Commands

This menu contains system parameters to display and configure the VLAN of SGSW-2402 . Menu items are:

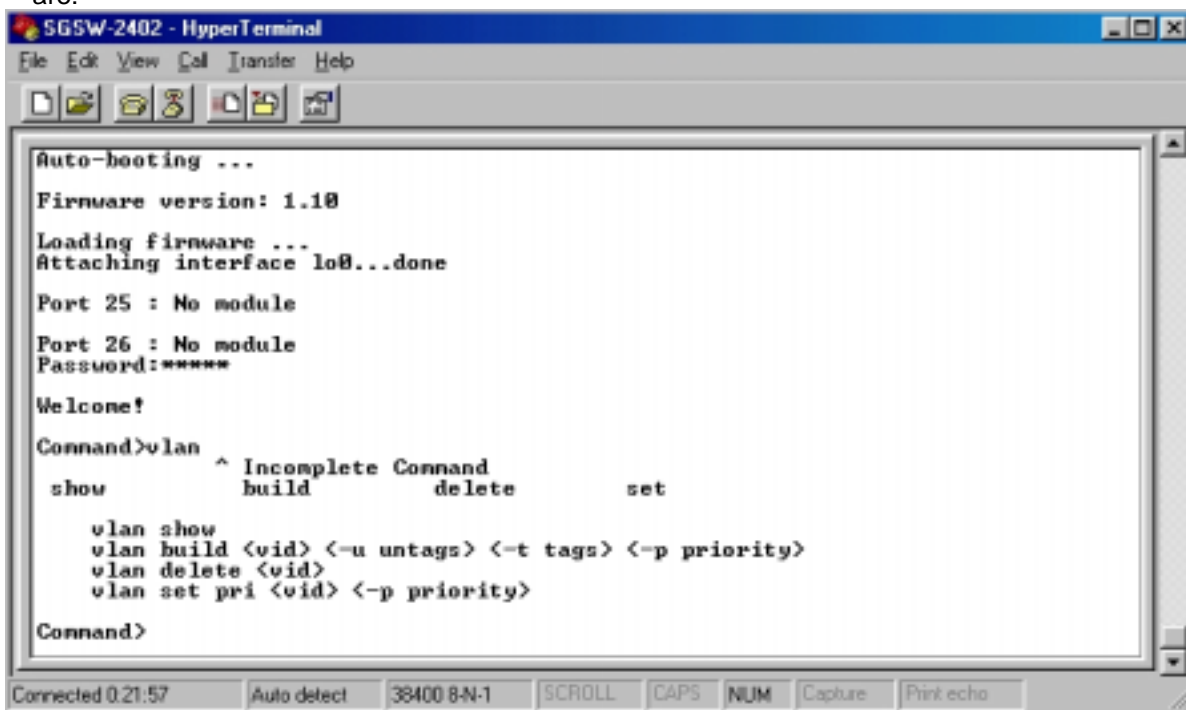


Figure 4-25 SGSW-2402 VLAN command Screen

### 4.2.24. vlan show

This command display VLAN states

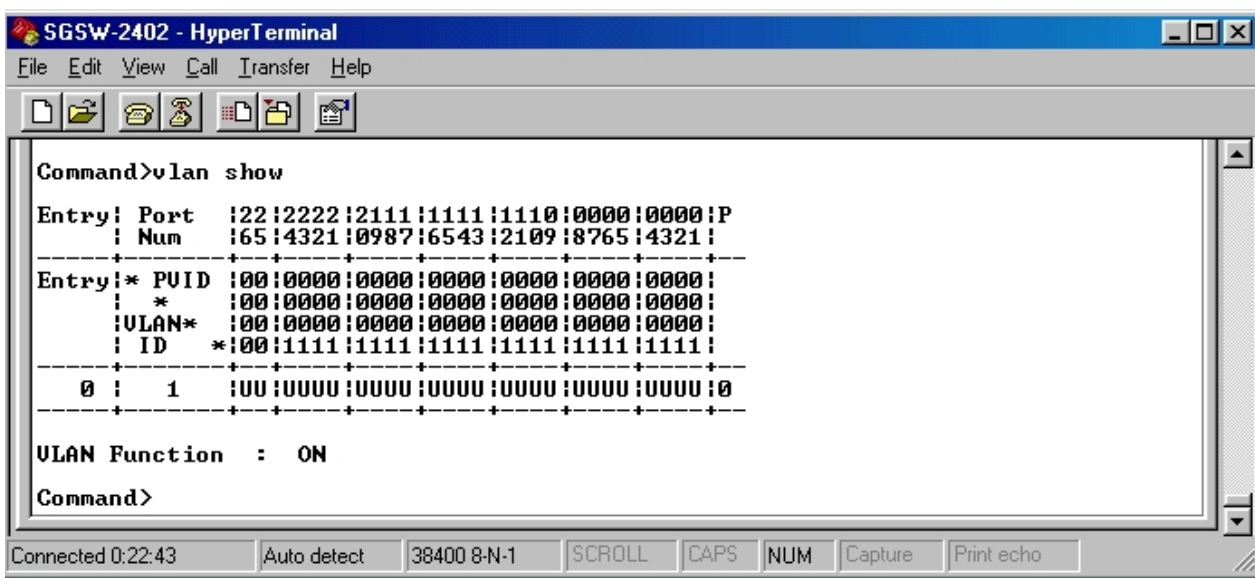
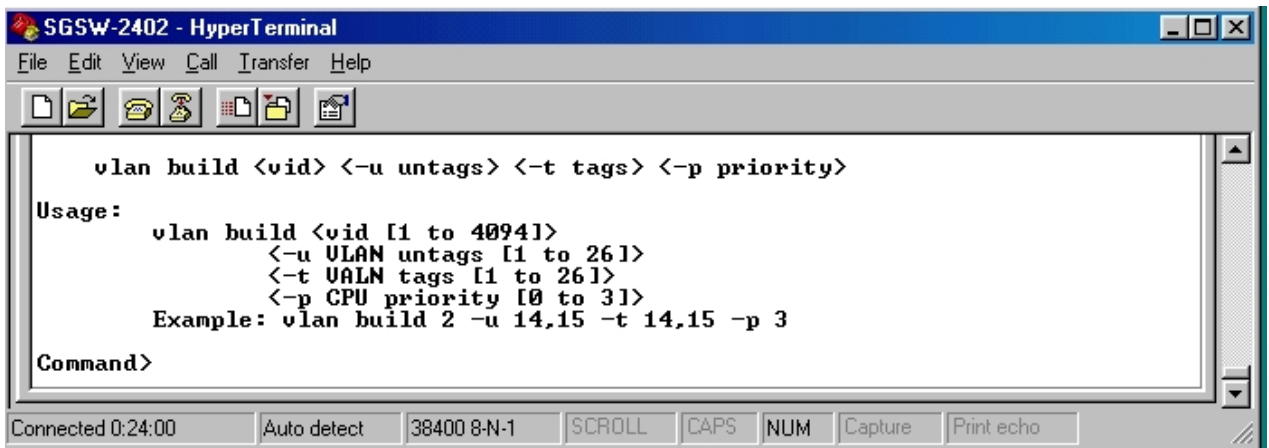


Figure 4-26 SGSW-2402 VLAN statics Screen

#### 4.2.25. vlan build <vid> <-u untags> <-t tags> <-p priority>

This command allow to create VLAN group and assign VLAN tag and untagged



The screenshot shows a HyperTerminal window titled "SGSW-2402 - HyperTerminal". The main text area displays the following information:

```
vlan build <vid> <-u untags> <-t tags> <-p priority>

Usage:
  vlan build <vid [1 to 4094]>
            <-u VLAN untags [1 to 261]>
            <-t VLAN tags [1 to 261]>
            <-p CPU priority [0 to 31]>
  Example: vlan build 2 -u 14,15 -t 14,15 -p 3

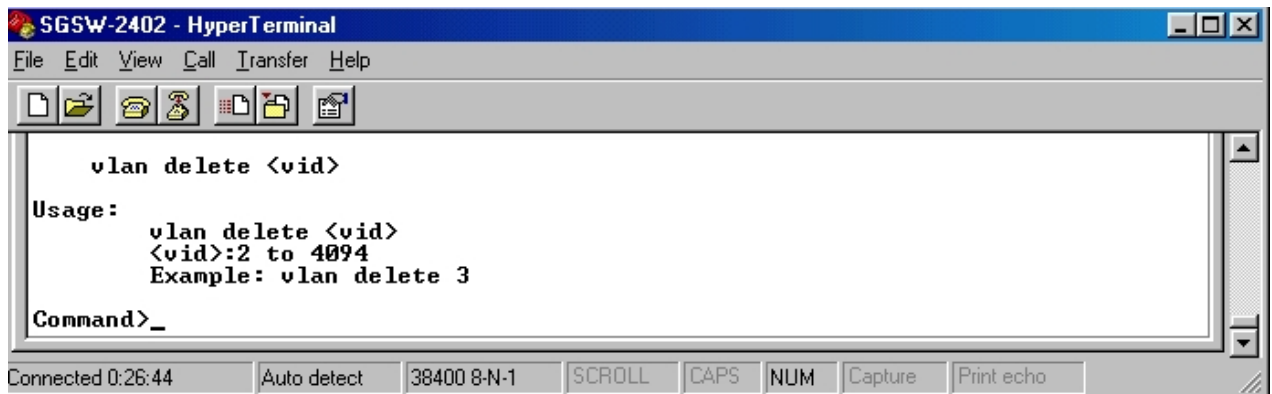
Command>
```

At the bottom of the window, there is a status bar with the following text: "Connected 0:24:00", "Auto detect", "38400 8-N-1", "SCROLL", "CAPS", "NUM", "Capture", and "Print echo".

Figure 4-27 SGSW-2402 VLAN setting Screen

#### 4.2.26. vlan delete <vid>

This command allow to delete VLAN group.



The screenshot shows a HyperTerminal window titled "SGSW-2402 - HyperTerminal". The main text area displays the following information:

```
vlan delete <vid>

Usage:
  vlan delete <vid>
  <vid>:2 to 4094
  Example: vlan delete 3

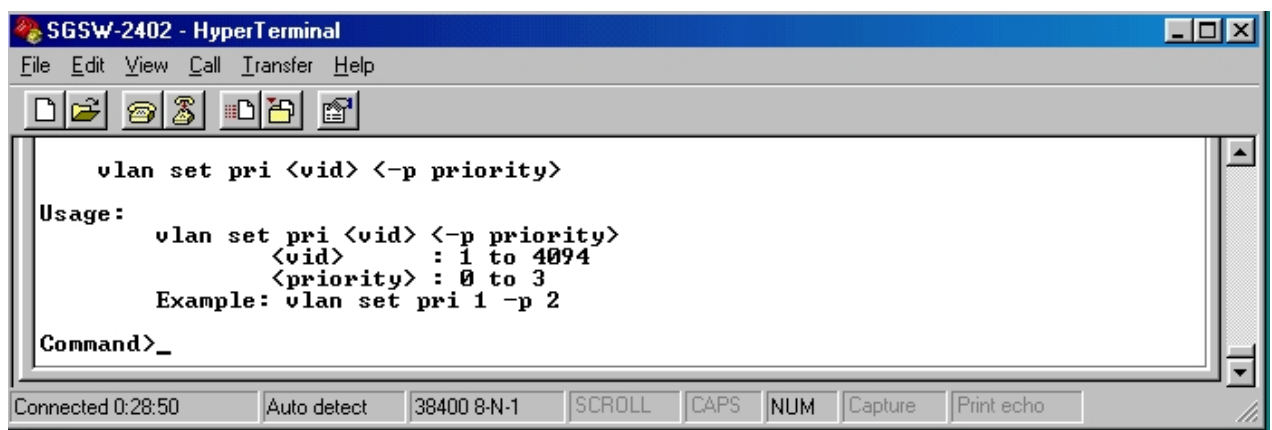
Command>_
```

At the bottom of the window, there is a status bar with the following text: "Connected 0:26:44", "Auto detect", "38400 8-N-1", "SCROLL", "CAPS", "NUM", "Capture", and "Print echo".

Figure 4-28 SGSW-2402 VLAN delete Screen

#### 4.2.27. vlan set pri <vid> <-p priority>

This command allow to set VLAN priority.



The screenshot shows a HyperTerminal window titled "SGSW-2402 - HyperTerminal". The main text area displays the following information:

```
vlan set pri <vid> <-p priority>

Usage:
  vlan set pri <vid> <-p priority>
            <vid> : 1 to 4094
            <priority> : 0 to 3
  Example: vlan set pri 1 -p 2

Command>_
```

At the bottom of the window, there is a status bar with the following text: "Connected 0:28:50", "Auto detect", "38400 8-N-1", "SCROLL", "CAPS", "NUM", "Capture", and "Print echo".

Figure 4-28 SGSW-2402 VLAN priority Screen

#### 4.2.28. trunk--TRUNK Management Commands

This menu contains system parameters to display and configure the trunk of this switch. Menu items are:

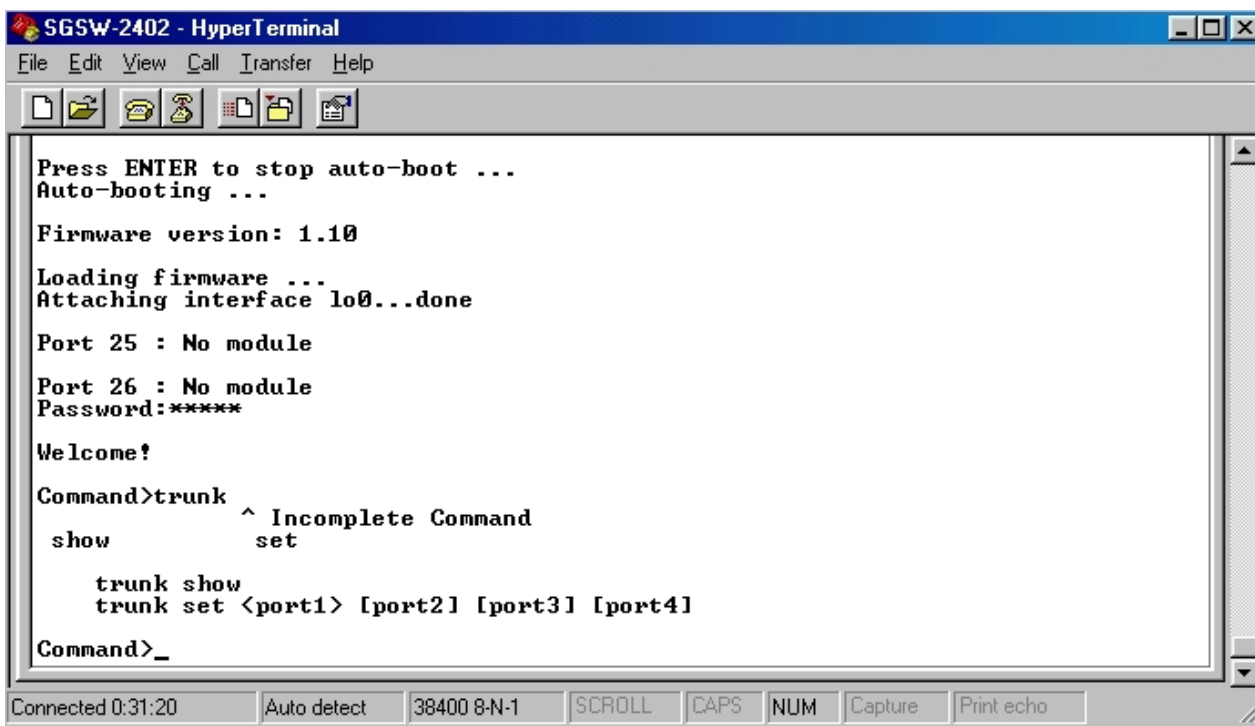


Figure 4-29 SGSW-2402 Trunk command Screen

#### 4.2.29. trunk show

This command displayed the Trunk status

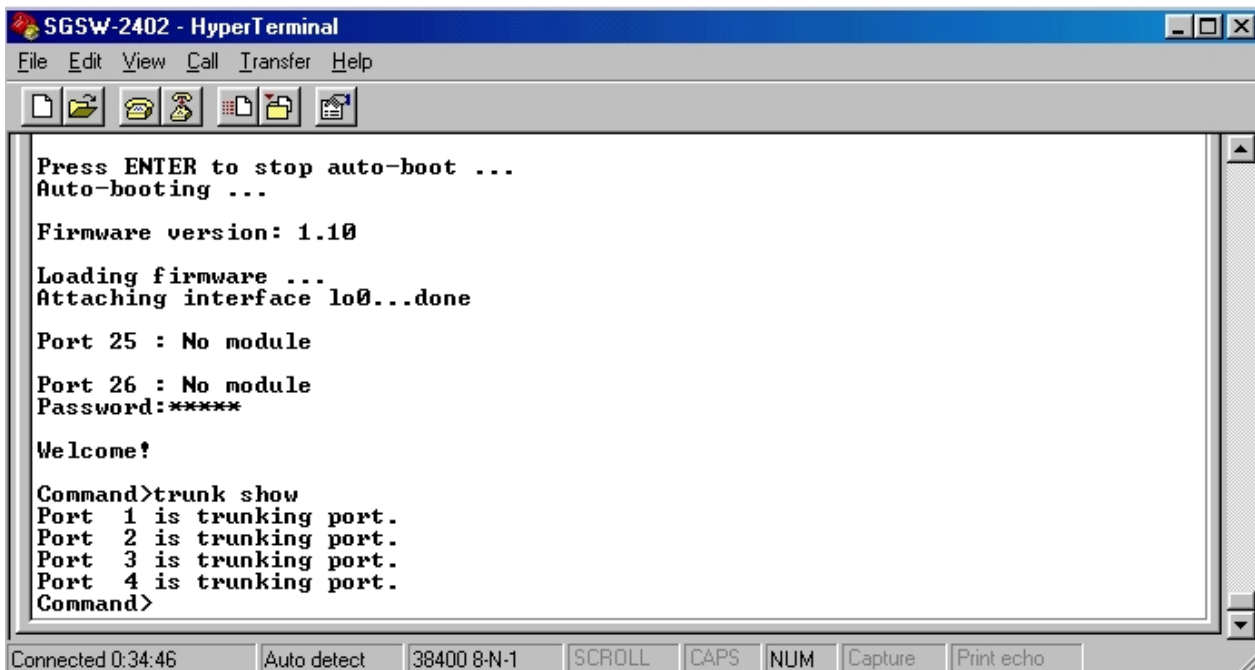


Figure 4-30 SGSW-2402 Trunk status Screen

#### 4.2.30. trunk set <port1> [port2] [port3] [port4]

This command allow to set trunk port

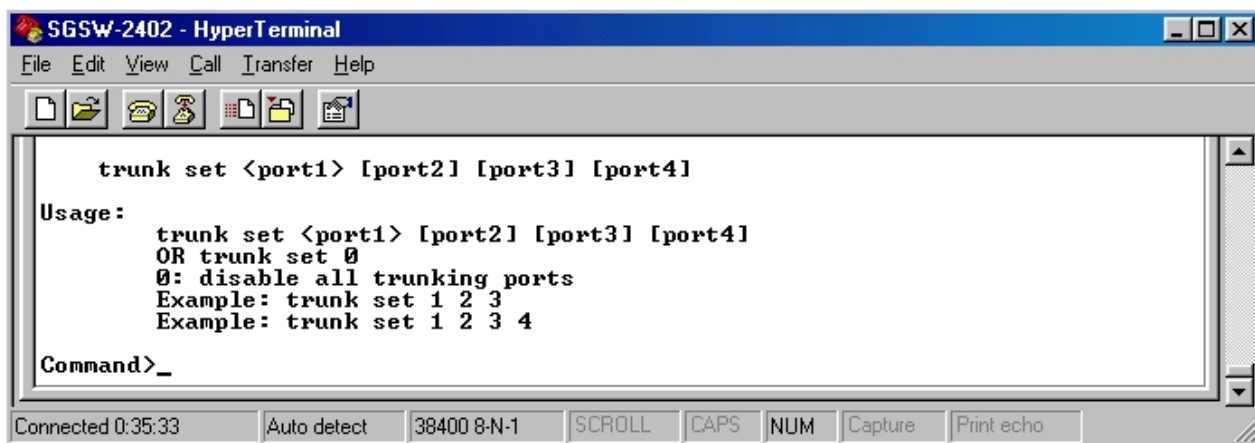


Figure 4-31 SGSW-2402 Trunk group setting Screen

#### 4.2.31. stp--STP Management Commands

This command allow to disable / enable STP function on SGSW-2402

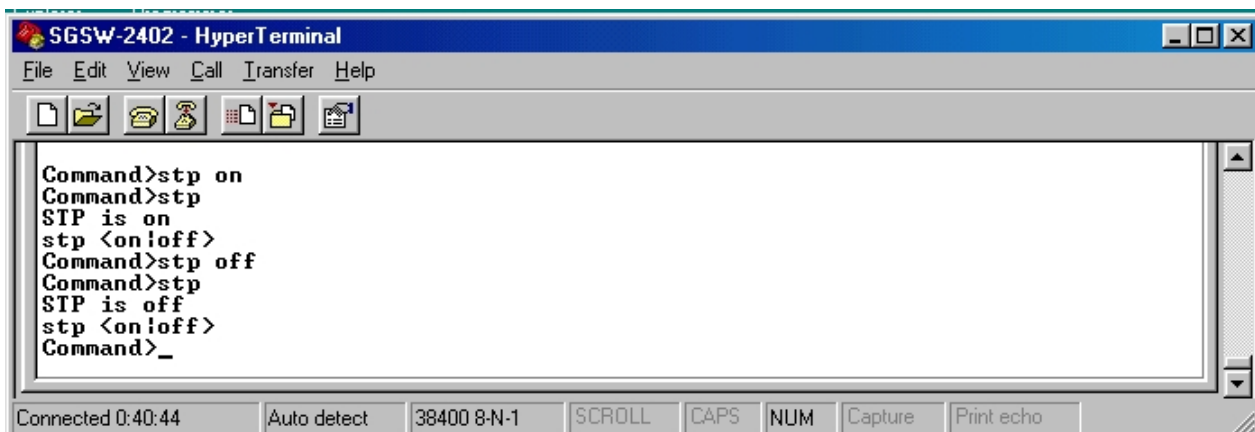


Figure 4-31 SGSW-2402 disable / enable STP Screen

#### 4.2.32. snmp--SNMP Management Commands

This command allow to disable / enable SNMP function on SGSW-2402

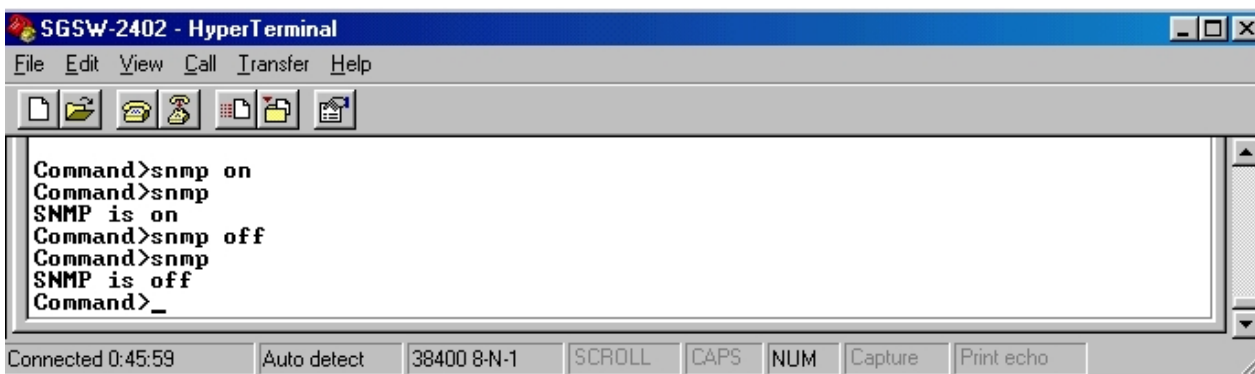
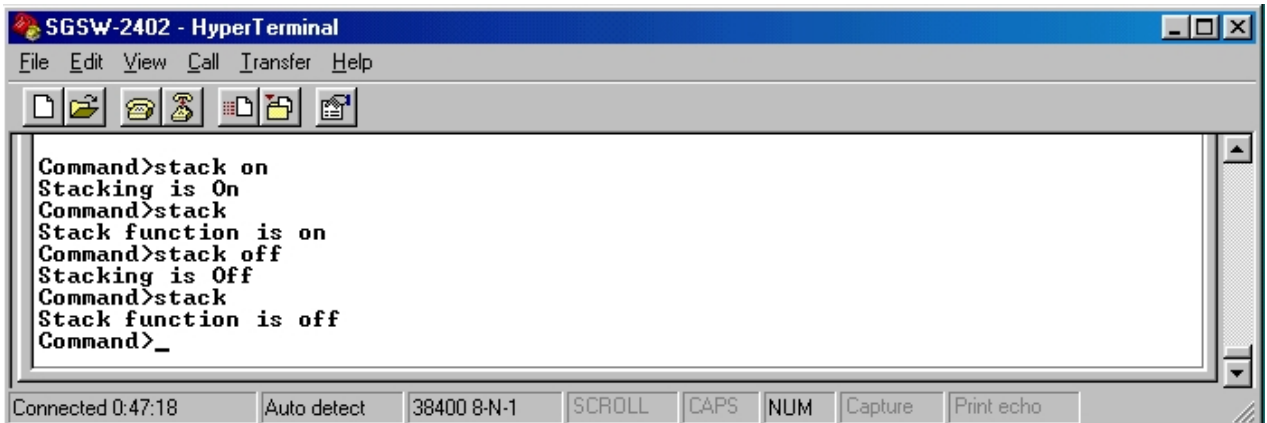


Figure 4-32 SGSW-2402 disable / enable SNMP Screen

### 4.2.33. stack--STACK Management Commands

This command allow to disable / enable Stack function on SGSW-2402



```
SGSW-2402 - HyperTerminal
File Edit View Call Transfer Help
[Icons]
Command>stack on
Stacking is On
Command>stack
Stack function is on
Command>stack off
Stacking is Off
Command>stack
Stack function is off
Command>_
Connected 0:47:18 Auto detect 38400 8-N-1 SCROLL CAPS NUM Capture Print echo
```

Figure 4-33 SGSW-2402 disable / enable Stack Screen

## APPENDIX A NETWORKING CONNECTION

When attaching an end-station to the device, a standard straight-through CAT5 cable may be used, even when the end-station is attached via a patch panel. However, when attaching another switch or attaching workstations via hubs, a crossover cable will need to be used. Please see the following wire diagrams for examples of both cable types.

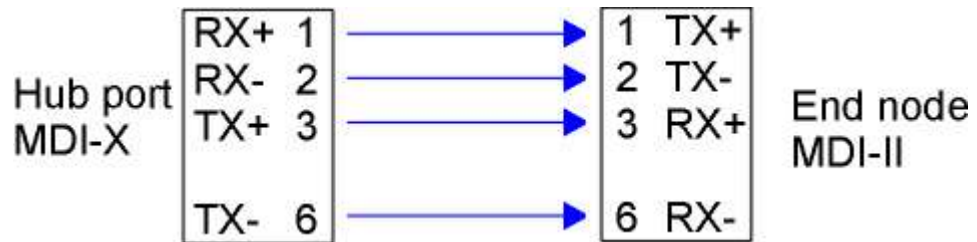


Figure A-1: Straight-Through Cable

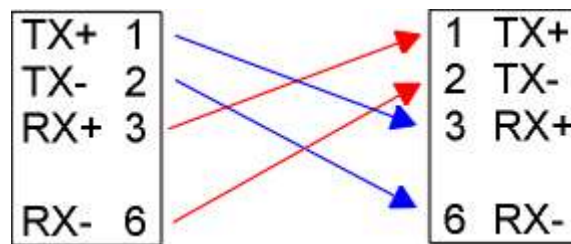


Figure A-2: Crossover Cable